ORDER NO. SD81051882C2

Service Manual

QUARTZ Synthesizer FM/AM Stereo Tuner

ST-S6

[E], [EK], [EG], [EF],
[EH], [EB], [EA]

ST-S6(K)

[EX], [EG], [EH]

Areas

- * [E] and [EX] are available in Switzerland and Scandinavia.
- * [EK] is available in United Kingdom.
- * [EG] is available in F.R. Germany.
- * [EF] is available in France.
- * [EH] is available in Holland.
- * [EB] is available in Belgium.
- * [EA] is available in Austria.

*** The cabinet and front panel are available in black color and silver types.**
*** The black type model is provided with (K) in the Service Manual.**

English

Specifications

(Specifications are subject to change without notice for further improvement.)

(DIN 45 500)

■ FM TUNER SECTION

Frequency range	87.50~108.02 MHz
Sensitivity	0.95 μV (IHF, usable)
S/N 30 dB	0.95 μV (75Ω)
S/N 26 dB	0.85 μV (75Ω)
S/N 20 dB	0.75 μV (75Ω)
IHF 46 dB stereo quieting sensitivity	20 μV/75Ω
Total harmonic distortion	
MONO (normal)	0.04%
STEREO (normal)	0.06%
S/N	
MONO	72 dB (80 dB, IHF)
STEREO	67 dB (74 dB, IHF)
Frequency response	5 Hz~18 kHz, +0.2 dB~ −0.5 dB
Alternate channel selectivity	
normal ±400 kHz	55 dB
super narrow ±200 kHz	25 dB
Capture ratio	1.0 dB
Image rejection at 98 MHz	80 dB
IF rejection at 98 MHz	110 dB
Spurious response rejection at 98 MHz	95 dB
AM suppression	55 dB
Stereo separation	
1 kHz	55 dB
10 kHz	40 dB
Carrier leak	
19 kHz	−65 dB (−70 dB, IHF)
38 kHz	−48 dB (−50 dB, IHF)
Channel balance (250 Hz~6,300 Hz)	±1.0 dB
Limiting point	0.75 μV
Bandwidth	
IF amplifier (normal)	180 kHz
FM demodulator (normal)	1000 kHz
Antenna terminals	75Ω (unbalanced)

■ AM TUNER SECTION

Frequency range	522~1611 kHz (9 kHz-step) 530~1620 kHz (10 kHz-step)
Sensitivity (S/N 20 dB)	30 μV, 250 μV/m
Selectivity (±9 kHz)	55 dB
Image rejection at 999 kHz	55 dB
IF rejection at 999 kHz	45 dB

■ GENERAL

Output voltage	0.3V (0.6V, IHF)
Power consumption	9W
Power supply	AC 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensions (W×H×D)	430 × 53 × 300 mm (16-15/16" × 2-3/32" × 11-13/16")
Weight	3.3 kg (7.3 lb.)

Technics

Matsushita Electric Trading Co., Ltd.
P.O. Box 288, Central Osaka Japan

Deutsch

TECHNISCHE DATEN

(Spezifikationen können infolge von Verbesserungen ohne Ankündigung geändert werden.)

(DIN 45 500)

■ UKW-TUNERTEIL

Wellenbereich	87,50 ~ 108,02 MHz
Eingangsempfindlichkeit	0,95 μV (nutzbar nach IHF)
S/R 30 dB	0,95 μV (75 Ω)
S/R 26 dB	0,85 μV (75 Ω)
S/R 20 dB	0,75 μV (75 Ω)
Stereoumschaltschwelle bei 46 dB nach IHF	20 μV/75 Ω
Gesamtklirrfaktor	
Mono (normal)	0,04%
Stereo (normal)	0,06%
Geräuschabstand	
Mono	72 dB (80 dB nach IHF)
Stereo	67 dB (74 dB nach IHF)
Frequenzgang	5 Hz ~ 18 kHz (+0,2 dB ~ −0,5 dB)
Trennschärfe bei Störsender	
normal ±400 kHz	55 dB
super narrow ±200 kHz	25 dB
Einfangverhältnis	1,0 dB
Spiegelfrequenz-Dämpfung bei 98 MHz	80 dB
ZF-Dämpfung bei 98 MHz	110 dB
Ansprechdämpfung auf Nebenfrequenzen bei 98 MHz	95 dB
AM-Unterdrückung	55 dB
Übersprechdämpfung	
1 kHz	55 dB
10 kHz	40 dB
Trägerrest	
19 kHz	−65 dB (−70 dB nach IHF)
38 kHz	−48 dB (−50 dB nach IHF)
Kanalabweichung (250 Hz ~ 6300 Hz)	±1,0 dB
Begrenzereinsatz	0,75 μV
Bandbreite	
ZF-Verstärker (normal)	180 kHz
UKW-Demodulator (normal)	1000 kHz
Antennenanschluß	75 Ω (unsymmetrisch)

■ AM-TUNERTEIL

Wellenbereiche	522 ~ 1611 kHz (9-kHz-Shritte) 530~1620 kHz (10-kHz Schritte)
Eingangsempfindlichkeit (S/R 20 dB)	30 μV, 250 μV/m
Trennschärfe (±9 kHz)	55 dB
Spiegelfrequenz-Dämpfung bei 999 kHz	55 dB
ZF-Dämpfung bei 999 kHz	45 dB

■ ALLGEMEINE DATEN

Ausgangsspannung	0,3 V (0,6 V, IHF)
Leistungsaufnahme	9W
Netzspannung	Wechselstrom 50 Hz/60 Hz, 110V/120V/220V/240V
Abmessungen (B×H×T)	430 × 53 × 300 mm
Gewicht	3,3 kg

Français

CARACTERSTIQUES

(Sujet à changement sans préaris.)

(DIN 45 500)

■ SECTION SYNTONISATEUR FM

Gamme de fréquence	87,50~108,02 MHz
Sensibilité	0,95 μV (IHF utilisable)
S/B 30 dB	0,95 μV (75Ω)
S/B 26 dB	0,85 μV (75Ω)
S/B 20 dB	0,75 μV (75Ω)
Sensibilité stéréo au seuil de 46 dB, IHF	20 μV/75Ω
Distorsion harmonique totale	
MONO (normal)	0,04%
STEREO (normal)	0,06%
Signal/Bruit	
MONO	72 dB (80 dB, IHF)
STEREO	67 dB (74 dB, IHF)
Réponse de fréquence	5 Hz~18 kHz, +0,2 dB~ −0,5 dB
Sélectivité alternée par canal	
normal ±400 kHz	55 dB
super narrow ±200 kHz	25 dB
Taux de capture	1,0 dB
Rejection d'image à 98 MHz	80 dB
Rejection FI à 98 MHz	110 dB
Rejection de réponse parasite à 98 MHz	95 dB
Suppression AM	55 dB
Séparation stéréophonique	
1 kHz	55 dB
10 kHz	40 dB
Fuite de porteuse	
19 kHz	−65 dB (−70 dB, IHF)
38 kHz	−48 dB (−50 dB, IHF)
Equilibrage de canaux (250 Hz~6,300 Hz)	±1,0 dB
Point de limite	0,75 μV
Largeur de bande	
Amplificateur FI (normal)	180 kHz
Démodulateur FM (normal)	1000 kHz
Bornes d'antenne	75Ω (asymétrique)

■ SECTION SYNTONISATEUR AM

Gamme de fréquence	522~1611 kHz (9 kHz par palier) 530~1620 kHz (10 kHz par palier)
Sensibilité (S/B 20 dB)	30 μV, 250 μV/m
Sélectivité (±9 kHz)	55 dB
Réjection d'image à 999 kHz	55 dB
Réjection FI à 999 kHz	45 dB

■ DIVERS

Tension de sortie	0,3 V (0,6V, IHF)
Consommation	9W
Alimentation	CA 50 Hz/60 Hz, 110V/120V/220V/240V
Dimensions (L×H×Pr)	430 × 53 × 300 mm
Poids	3,3 kg

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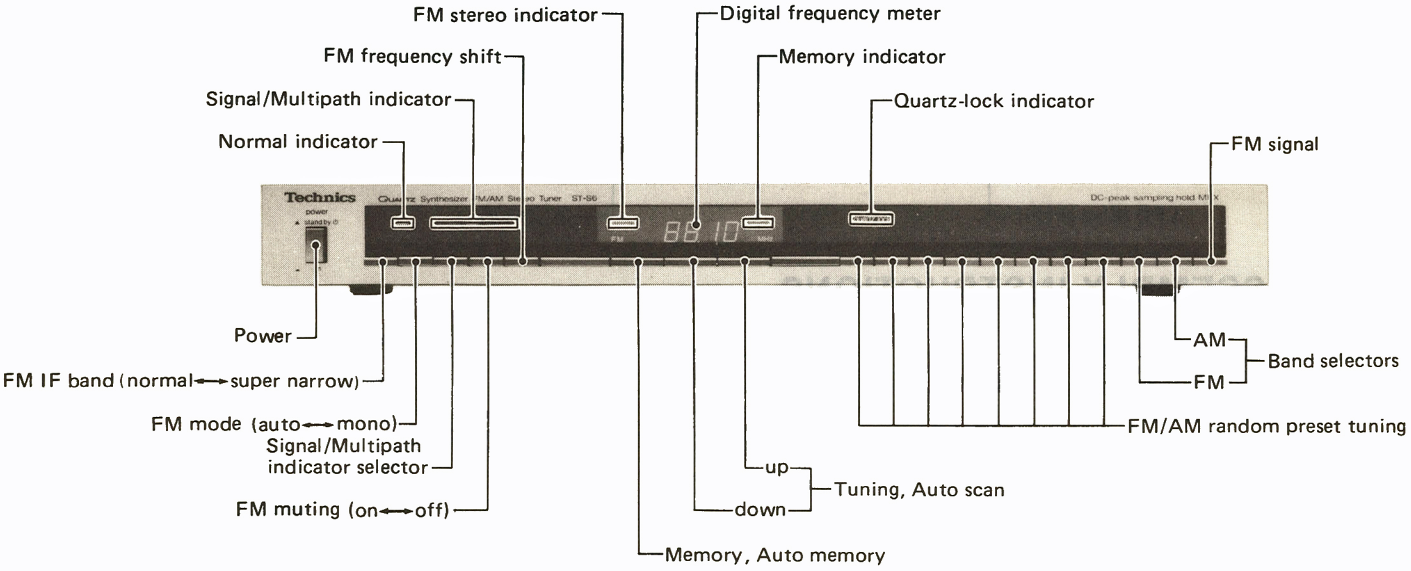
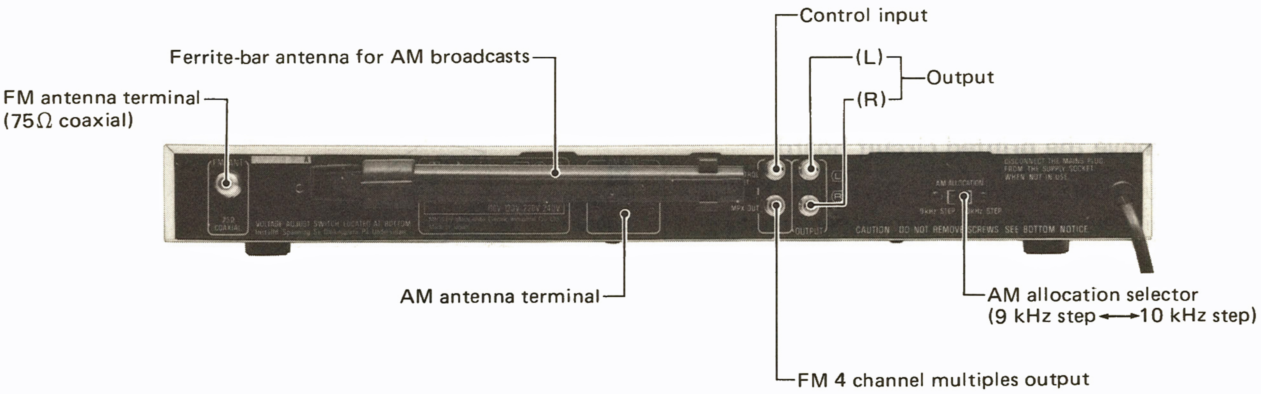
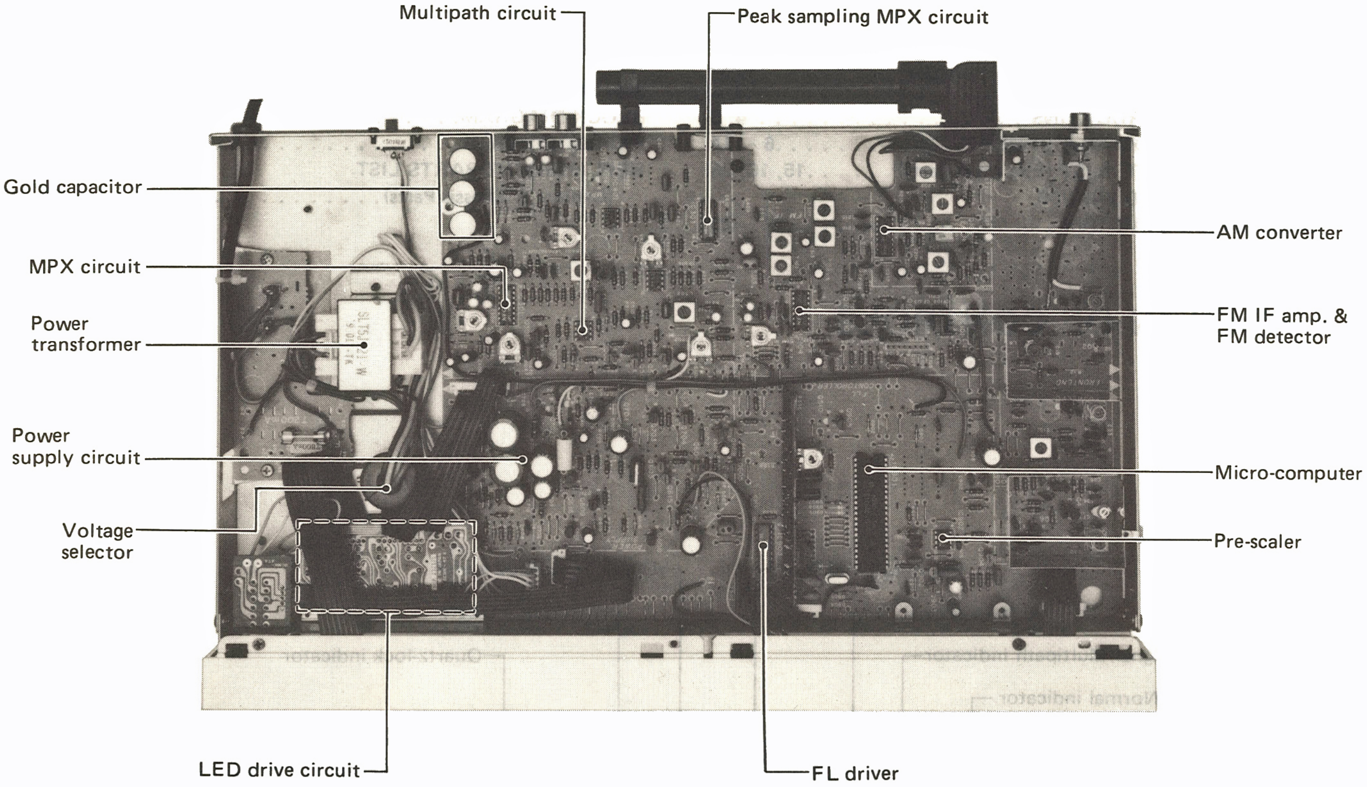
■ LOCATION OF CONTROLS


FM stereo indicator
Digital frequency meter
FM frequency shift
Memory indicator
Signal/Multipath indicator
Quartz-lock indicator
Normal indicator
FM signal
Technics
Quartz Synthesizer FM/AM Stereo Tuner ST-S6
DC-peak sampling hold MPX
Power
AM
Band selectors
FM
FM IF band (normal ↔ super narrow)
FM/AM random preset tuning
FM mode (auto ↔ mono)
Signal/Multipath indicator selector
up
Tuning, Auto scan
FM muting (on ↔ off)
down
Memory, Auto memory


Control input
Ferrite-bar antenna for AM broadcasts
(L)
Output
FM antenna terminal (75Ω coaxial)
(R)
AM antenna terminal
AM allocation selector (9 kHz step ↔ 10 kHz step)
FM 4 channel multiples output

● **Voltage adjust switch located at bottom**


Multipath circuit
Peak sampling MPX circuit
Gold capacitor
MPX circuit
Power transformer
Power supply circuit
Voltage selector
AM converter
FM IF amp. & FM detector
Micro-computer
Pre-scaler
LED drive circuit
FL driver

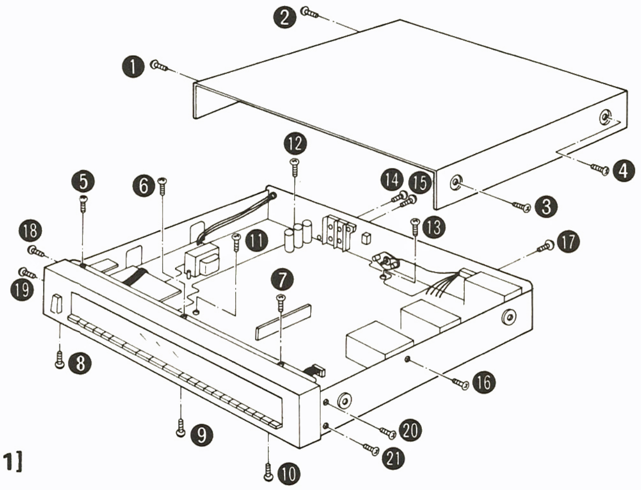
■ DISASSEMBLY INSTRUCTIONS

● How to remove the cabinet

1. Remove the 4 setscrews (Fig. 1 : ❶ ~ ❹) of the cabinet.
2. Remove the cabinet.

● How to remove the front panel

1. Remove the cabinet.
2. Remove the 6 setscrews (Fig. 1 : ❺ ~ ❿) of the front panel.
3. Lift the front panel in the direction of the arrow in the Fig. 2 to detach it from the chassis.

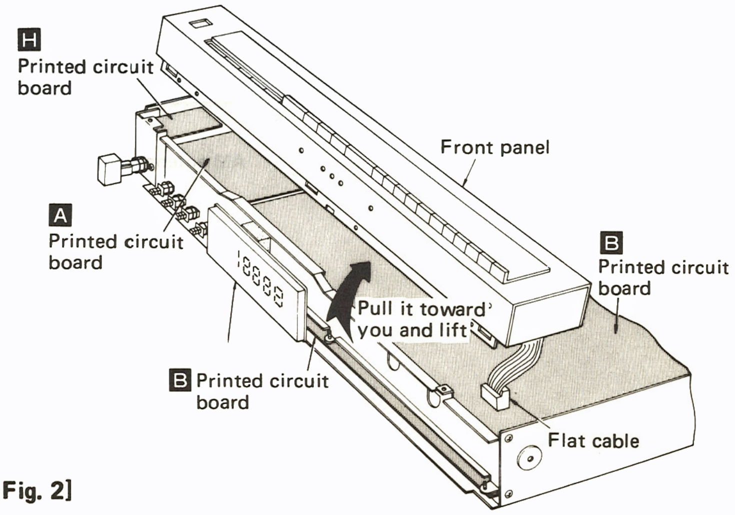

❶
❷
❸
❹
❺
❻
❼
❽
❾
❿
⓫
⓬
⓭
⓮
⓯
⓰
⓱
⓲
⓳
⓴
㉑

[Fig. 1]

● How to remove the printed circuit board

B printed circuit board (FM/AM IF–RF circuit, FM MPX circuit, FL display circuit and power supply circuit.)

1. Remove the cabinet. (Refer to "How to remove the cabinet.")
2. Remove the 7 setscrews (Fig. 1 : ⓫ ~ ⓱) of the chassis.
3. Remove the 4 setscrews (Fig. 1 : ⓲ ~ ㉑) of the front panel.
4. Remove the printed circuit board from the chassis along with the front panel. Reise it and check.


H Printed circuit board
Front panel
A Printed circuit board
B Printed circuit board
Pull it toward you and lift
B Printed circuit board
Flat cable

[Fig. 2]

D printed circuit board (Preset tuning switch circuit.)

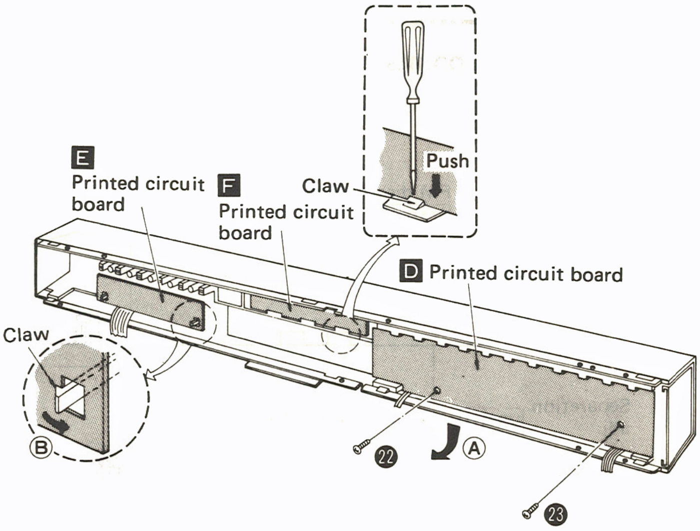
1. Remove the cabinet and front panel. (Refer to "How to remove the cabinet" and "How to remove the front panel.")
2. Pull out the flat cable in Fig. 2 and turn over the front panel as shown in Fig. 3.
3. Remove the 2 setscrews (Fig. 3 : ㉒, ㉓), then remove the printed circuit board the direction of the arrow Ⓐ in the Fig. 3.

F printed circuit board. (Memory and tuning switch circuit.)

1. Remove the 3 claws used to secure the printed circuit board by using a screwdriver. (Refer to Fig. 3)

E printed circuit board. (Signal/Multipath indicator circuit.)

1. Open the 2 claws used to secure the printed circuit board in the direction of arrow Ⓑ. (Refer to Fig. 3)

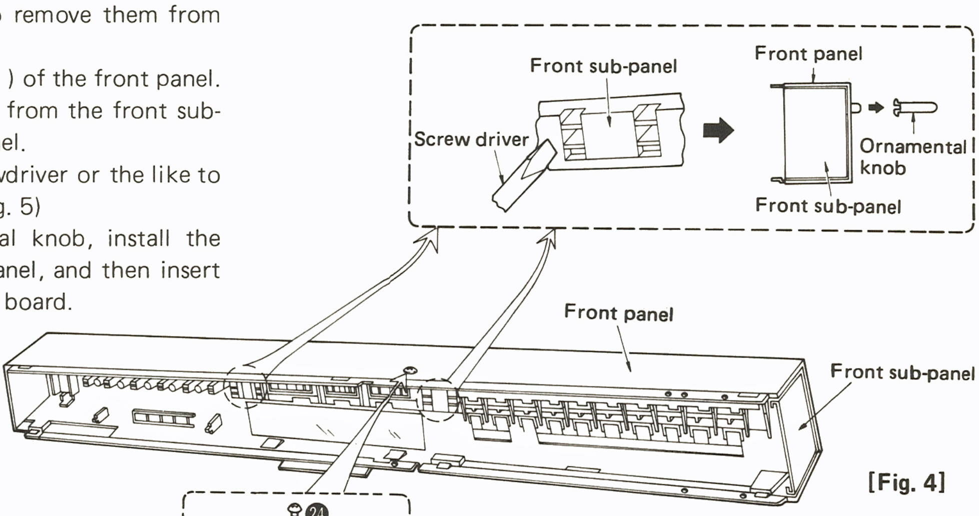

E
Printed circuit board
F
Printed circuit board
Claw
Push
D Printed circuit board
Claw
Ⓑ
㉒
Ⓐ
㉓

[Fig. 3]

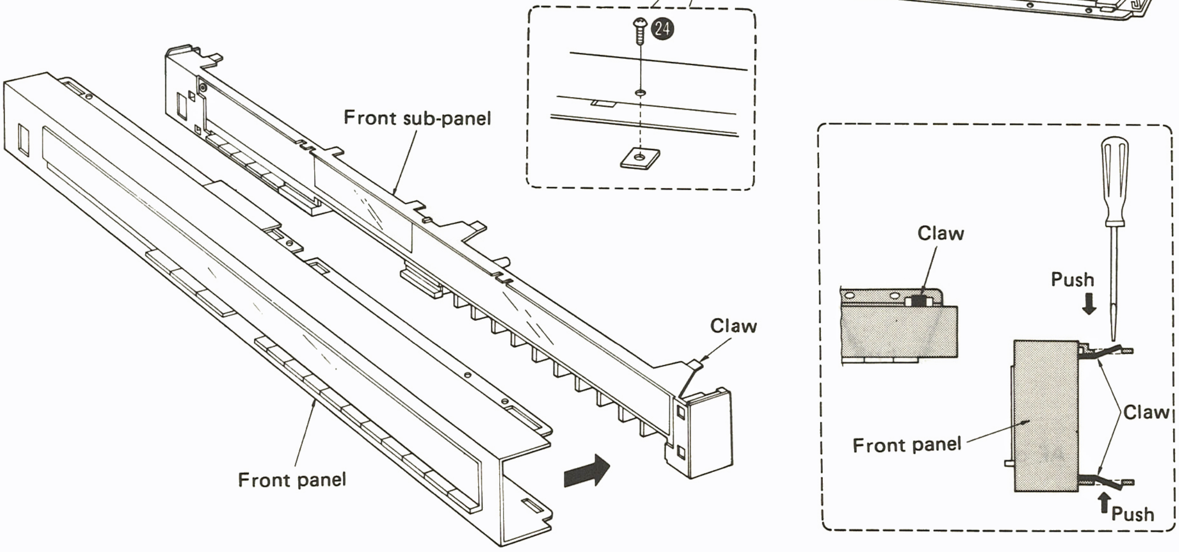
• How to remove the front sub-panel

1. Remove the cabinet and front panel. (Refer to "How to remove the cabinet" and "How to remove the front panel.")
2. Remove the D, E and F printed circuit board. (Refer to "How to remove the printed circuit board.")
3. Push the two ornamental knobs to remove them from the front sub-panel. (See Fig. 4)
4. Remove the 1 setscrew (Fig. 4 : ㉔) of the front panel.
5. The claws projected (at 6 portions) from the front sub-panel are engaged with the front panel. Disengage the claws from by screwdriver or the like to remove the front sub-panel. (See Fig. 5)

Note: When mounting the ornamental knob, install the front sub-panel on the front panel, and then insert the knobs and secure them with board.


Front sub-panel
Screw driver
Front panel
Ornamental knob
Front sub-panel
Front panel
Front sub-panel

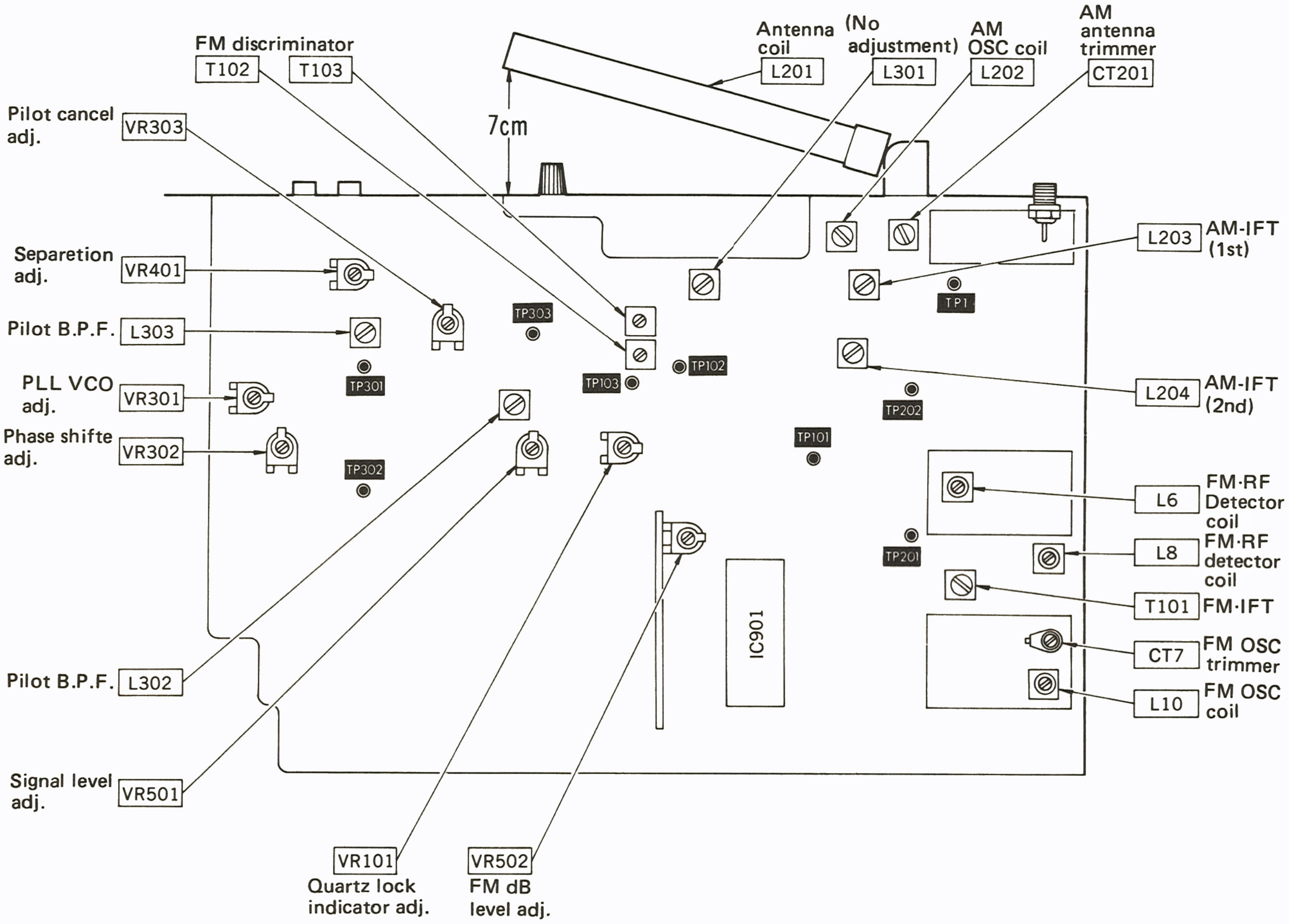
[Fig. 4]

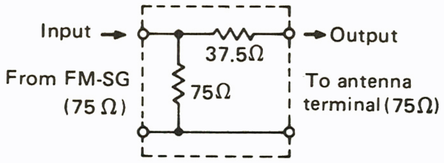

㉔
Front sub-panel
Claw
Front panel
Claw
Push
Claw
Front panel
Push

[Fig. 5]

MEASUREMENTS AND ADJUSTMENTS

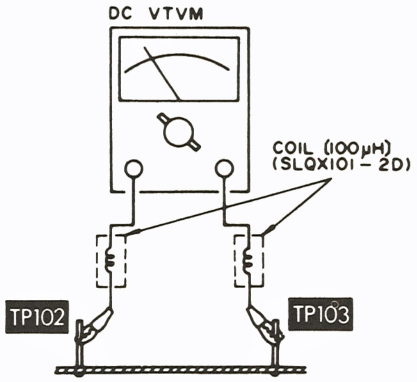
- **Adjustment points**


FM discriminator
T102
T103
Pilot cancel adj.
VR303
7cm
Antenna coil
L201
(No adjustment)
L301
AM OSC coil
L202
AM antenna trimmer
CT201
Separetion adj.
VR401
Pilot B.P.F.
L303
PLL VCO adj.
VR301
Phase shifte adj.
VR302
TP303
TP301
TP302
TP103
TP102
TP1
TP202
TP101
TP201
L203
AM-IFT (1st)
L204
AM-IFT (2nd)
L6
FM·RF Detector coil
L8
FM·RF detector coil
T101
FM·IFT
CT7
FM OSC trimmer
L10
FM OSC coil
IC901
Pilot B.P.F.
L302
Signal level adj.
VR501
VR101
Quartz lock indicator adj.
VR502
FM dB level adj.

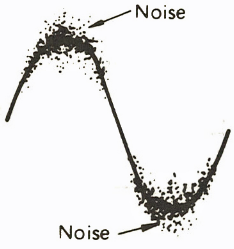

Input
From FM-SG
(75 Ω)
37.5Ω
75Ω
Output
To antenna terminal (75Ω)

(75Ω FM dummy antenna)

[Fig. 6]
(Abb. 6)

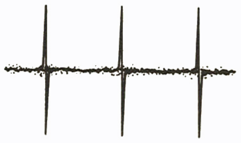

DC VTVM
COIL (100μH)
(SLQX101 – 2D)
TP102
TP103

[Fig. 7]
(Abb. 7)



AF output wave form

[Fig. 8]
(Abb. 8)



(Pilot signal cancel)

[Fig. 9]
(Abb. 9)

MEASUREMENTS AND ADJUSTMENTS English

- L301 have been already adjustment, and require no adjustment.
- Set AM allocation selector to "9kHz" position.

AM TUNER ADJUSTMENT

Setting and Equipment used

1. AC and DC electronic voltmeters (VTVM)
2. AM signal generator (AM-SG)
3. Maintain line voltage at rated voltage.
4. Output of signal generator should be no higher than necessary to obtain an output reading.
5. Adjust the antenna coil (L201) position by using a screwdriver so that it is at approximately 7 cm degrees to the rear panel.
6. Use a non-metal screwdriver for the adjustment.
7. Set broadcast selector to "AM" position.

Step No.	AM SIGNAL GENERATOR		DISPLAY FREQUENCY	PREPARATIONS	PARTS ADJUSTED	ADJUSTING PROCEDURE
	CONNECTION	FREQUENCY				
	AM-IF ADJUSTMENT					
1	Connect AM-SG to AM antenna terminal through 200pF capacitor. Common to chassis. (Powerful input)	450 kHz (30% Mod. with 400 Hz)	Frequency of non-interference	Connect AC VTVM or scope to "OUTPUT" terminals of the set.	T203 (1st IFT) T204 (2nd IFT)	Adjust the input frequency and adjustment points so that the output becomes maximum.
	AM-RF ADJUSTMENT					
2	Connect AM-SG to AM antenna terminal through 200pF capacitor. Common to chassis. (Weak input)	522 kHz (30% Mod. with 400 Hz)	522 kHz	Connect DC VTVM to TP201 terminal.	L202 (OSC Coil)	Adjust L202 to 1.0V ± 0.05V.
3		612 kHz (30% Mod. with 400 Hz)	612 kHz	Connect AC VTVM to scope to "OUTPUT" terminals of the set.	L201 (ANT Coil)	1. Adjust for maximum output. 2. Adjust ferrite core of L201 by screwdriver.
4		1503 kHz 30% Mod. with 400 Hz)	1503 kHz	Connect AC VTVM to scope to "OUTPUT" terminal of the set.	CT201 (ANT Trimmer)	1. Adjust for maximum output. 2. Repeat steps (3) and (4) until the frequency correctly matches the dial display.

FM TUNER ADJUSTMENT

Equipment used

1. FM signal generator (FM-SG)
2. Stereo modulator
3. Distortion analyser
4. Oscilloscope
5. AC and DC electronic voltmeters (VTVM).
6. Frequency counter (19 kHz and 108 MHz measurable).
7. FM 75Ω dummy antenna (Fig. 6).

Preparation of FM signal generator (FM-SG)

1. Connect stereo modulator to FM-SG.
2. Apply SG output to antenna terminal of the set through 75Ω FM dummy antenna.
3. The standard input of the set is 60 dB (1mV), 400 Hz 100% modulation (Because of using dummy antenna, SG output must be 12 dB plus (IHF). That is, when input is 60 dB, SG output is to be 72 dB).

Setting

1. Set IF band selector to "normal" position
2. Set broadcast selector to "FM" position.
3. FM mode switch to "auto" position.
4. FM muting and FM tuning level switch to "off/standard" position.
5. Signal/Multipath indicator selector (display) switch to "signal" position.

Step No.	FM SIGNAL GENERATOR		DISPLAY FREQUENCY	PREPARATIONS	PARTS ADJUSTED	ADJUSTING PROCEDURE
	CONNECTION	FREQUENCY				
	FM-IF ADJUSTMENT					
5	——	No-Signal	100.1 MHz	Connect DC VTVM between TP102 and TP103 through choke coil. (Refer to Fig. 7)	T102 (Discri. IFT)	Adjust T102 core so that voltage measured in signal mode is 0V in 300mV range.
	FM-RF ADJUSTMENT					
6	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna.	87.9 MHz	87.9 MHz	Connect DC VTVM to TP1 terminal.	L10 (OSC Coil)	Adjust L10 (OSC Coil) to 4.1V ± 0.1V.
7		90.1 MHz (100% Mod. with 400 Hz) weak input	90.1 MHz	Connect scope to "OUTPUT" terminals of the set.	L6 (RF DET Coil 1st) L8 (RF DET Coil 2nd) L1 (ANT Coil)	1. Add weak input so that noise is included in the output wave from. 2. Make the adjustment so that the output wave form is vertically symmetrical. (Refer to Fig. 8) 3. Repeat the steps (7) and (8) until the frequency correctly matches the broadcasts frequency display.
8		106.1 MHz (100% Mod. with 400 Hz)	106.1 MHz	Connect scope to "OUTPUT" terminals of the set.	CT7 (OSC Trimmer)	

Step No.	FM SIGNAL GENERATOR		DISPLAY FREQUENCY	PREPARATIONS	PARTS ADJUSTED	ADJUSTING PROCEDURE
	CONNECTION	FREQUENCY				
	FM MONO DISTORTION ADJUSTMENT					
9	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna.	100.1 MHz (100% Mod. with 400 Hz)	100.1 MHz	*Connect DC VTVM between TP102 and TP103 through choke coil. (Refer to Fig. 7) *Connect distortion analyser to "OUTPUT" terminal of the set.	T102 (Discri. IFT) T103 (Discri. IFT)	1. Adjust T102 core so that voltage measured in signal mode is 0V in 300mV range. 2. Adjust T103 core so that distortion of right and left channels are minimized.
	FM MPX PILOT (VCO) ADJUSTMENT					
10	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna. (Monaural signal)	100.1 MHz (Non-modulated)	100.1 MHz	Connect frequency counter (through 100kΩ) to TP302 terminal.	VR301 (VCO)	1. Set the FM muting/FM mode switch to "on/auto". 2. Adjust VR 301 to 19 kHz ± 30 Hz.
	PILOT SIGNAL BAND PASS FILTER ADJUSTMENT					
11	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna. (Apply 60 dB, pilot 10% Mod. stereo signal)	100.1 MHz (Non-modulated)	100.1 MHz	Connect AC VTVM to TP301 terminal.	L302 (BPF) L303 (BPF)	1. Set the FM mode switch to "auto". 2. Adjust for maximum output.
	PILOT CANCEL ADJUSTMENT					
12	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna. (Apply 60 dB, pilot 10% Mod. stereo signal)	100.1 MHz (Non-modulated)	100.1 MHz	Connect scope to TP303 terminal.	L303 (BPF) VR303 (Pilot cancel)	1. Set the FM mode switch to "auto". 2. Repeatedly adjust VR303 and L303 so that the waveform is as shown in Fig. 9. When the output of TP303 is minimum.
	PHASE SHIFTER ADJUSTMENT					
13	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna. (Apply 60dB, pilot 10% Mod. stereo signal)	100.1 MHz (100% Mod. with 400 Hz)	100.1 MHz	Connect AC VTVM to left ch. "OUTPUT" terminal.	VR302 (Phase shifter)	1. Set the FM mode switch to "auto". 2. Adjust for maximum output.
	STEREO DISTORTION ADJUSTMENT					
14	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna. (Pilot 10% Mod. stereo signal)	100.1 MHz (100% Mod. with 400 Hz) (L mode)	100.1 MHz	Connect distortion analyser to "OUTPUT" terminals of the set through low-pass filter. (fc = 15 kHz ~ 19 kHz)	T101 (IFT)	1. Set the FM muting/FM mode switch to "on/auto". 2. Re-adjust T101 within ± 90° from the preset core position so that the distortion of L ch is minimized. 3. Re-check the steps 5, 7, 8 and 9.
	SEPARATION ADJUSTMENT					
15	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna. (Pilot 10% Mod. stereo signal)	100.1 MHz (100% Mod. with 1 kHz) (L or R mode)	100.1 MHz	Connect AC VTVM to "OUTPUT" terminals of the set through low-pass filter. (fc = 15 kHz ~ 19 kHz)	VR401 (Separation)	1. Set the FM muting/FM mode switch to "on/auto". 2. Adjust VR401 so that R output is minimized when stereo modulator is in L (L ch modulation) mode and that L output is minimized in R mode.
	SIGNAL METER LED (Light Emitting Diode) INDICATOR ADJUSTMENT					
16	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna. (Apply 42 dB to antenna terminal)	100.1 MHz (100% Mod. with 400 Hz)	100.1 MHz	Signal meter LED	VR501 (meter level)	Adjust VR501 while observing the signal meter LED so that the indicator at 5 th is about to turn on.

	FM SIGNAL GENERATOR		DISPLAY FREQUENCY	PREPARATIONS	PARTS ADJUSTED	ADJUSTING PROCEDURE
	CONNECTION	FREQUENCY				
	FM SIGNAL-STRENGTH INDICATOR ADJUSTMENT					
17	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna. (Apply 54 dB to antenna terminal)	100.1 MHz (100% Mod. with 400 Hz)	100.1 MHz	———	VR502	1. Push the FM signal level indicator button switch, and adjust VR502 so that 54 dB is displayed. 2. Decrease the input down to 30 dB and then slowly increase up to 54 dB. 3. Make sure that the display is then 56 dB. If 54 dB is not displayed, re-adjust it.
	FM QUARTZ LOCK INDICATOR ADJUSTMENT					
18	Connect FM-SG to FM antenna terminal through 75Ω FM dummy antenna. (Apply 6.0 dB to antenna terminal)	100.1 MHz (100% Mod. with 400 Hz)	100.1 MHz	———	VR101	1. Set the FM mode switch to "off". 2. First rotate VR101 anticlockwise, and then slowly clockwise so that the quartz lock indicator lights up.

■ EINSTELLUNGSANWEISUNGEN Deutsch

- Die spule (L301) ist bereits justiert worden und bedarf Kneiner weiteren Justierung.
- AM Wellenverteilungs-Wahlschalter auf Position "9kHz" stellen.

AM (MW)-EINSTELLUNG

Stellungen und zu benutzende Geräte

1. Elektronische Voltmeter für Wechsel- und Gleichstrom (VTVM)
2. AM (MW)-Meßsender (AM-SG)
3. Netzspannung auf ihren Sollwerthalten.
4. Der Ausgang des Meßsenders darf nicht höher sein als unbedingt notwendig für eine gute Ablesung.
5. Nittels eines Schraubenziehers des Stellung der Antennenspule (L201) so einstellen, daß, sie gegen die Rückenplatte einen Winkel von ca. 7 cm macht.
6. Einen nichtmetallischen Schraubenzieher für die Einstellungen verwenden.
7. Bereichsschalter. . . . . AM

Nr.	AM (MW)-MESSENDER		ANZEIGE-FREQUENZ DURCH VOR-EINSTELLUNG	VORBEREITUNG	ABGLEICHSPUNKTE	ABGLEICHSVERFAHREN
	ANSCHLUSS	FREQUENZ				
	AM (MW)-ZF-ABGLEICH					
1	Einen MW-Signalgenerator über einen 200pF Kondensator mit dem MW-Antenneneingang verbinden. Die gemeinsame Leitung mit dem Chassis verbinden. (Starker Eingang)	450 kHz (400 Hz Modulat., 30%)	Kein Empfang	Oszilloskop oder Wechselstrom-Voltmeter über den Ausgang "OUTPUT".	T203 (1. IFT) T204 (2. IFT)	Die Eingangsfrequenz und die Einstellungspunkte so adustieren, daß der Ausgang den maximalen Wert erreicht.
	AM (MW)-HF-ABGLEICH					
2	Einen MW-Signalgenerator über einen 200pF Kondensator mit dem MW-Antenneneingang verbinden. Die gemeinsame Leitung mit dem Chassis verbinden. (Schwacher Eingang)	522 kHz (400 HZ Modulat., 30%)	522 kHz	Zwischen TP201 und Erdung Gleichstrom-Voltmeter schließen.	L202 (Osc. Spule)	L202 so justieren, daß die vom Gleichstrom-Voltmeter gemessene. (1.0V ± 0.05V)
3		612 kHz (400 Hz Modulat., 30%)	612 kHz	Oszilloskop oder Wechselstrom-Voltmeter über den Ausgang "OUTPUT" schließen.	L201 (Ant. Spule)	1. Auf max. Ausgang abgleichen. 2. Den Ferritkern von L201 mit einem Schraubendreher justieren.
4		1503 kHz (400 Hz Modulat., 30%)	1503 kHz	Oszilloskop oder Wechselstrom-Voltmeter über den Ausgang "OUTPUT" schließen.	CT201 (Ant. Trimmer)	1. Auf max. Ausgang abgleichen. 2. Die Schritte (3) und (4) wiederholen, bis die Frequenz genau mit der Skalenanzeige übereinstimmt.

FM (UKW)-EINSTELLUNG

Verwendete Einrichtungen

1. UKW-Meßsender (FM-SG)
2. Stereo-Modulator (oder Trennmesser)
3. Verzerrungsmesser
4. Oszilloskop
5. Elektronische Voltmeter für Wechsel-und Gleichstrom (VTVM)
6. Signalfrequenzmesser (meßar für 19 kHz und 108 MHz)
7. UKW 75-Ohm Kunstantenne (Abb. 6)

Vorbereitung AM UKW-Messender (FM-SG)

1. Stereo-Modulator an FM-SG anschließen.
2. SG-Ausgang über 75-Ohm UKW Kunstantenne an den Antenneneingang des Gerätes schließen.
3. Der normale Eingang des Gerätes beträt 60 dB (1mV), 400 Hz 100% Modulation. (Wegen Verwendung der Kunstantenne muß der Signalausgang 12 dB plus (IHF) sein: d.h. beim Eingang von 60 dB soll der Signalausgang 72 dB sein.)

Zustand des Gerätes

1. Den UKW-Antennenwahlschalter auf die "normal"-Stellung bringen.
2. Den Eingangswähler auf die "FM"-Position stellen.
3. UKW-Betriebsart-Schalter in die "auto"-position.
4. UKW-Stillabstimmungs-und UKW-Abstimmungspegel-Schalter in die "off/standard"-position.
5. Signal/Multipath-Anzeiger-Wahlschalter (Anzeige) in die "Signal"-position.

Nr	FM (UKW) MESSENDER		ANZEIGE-FREQUENZ DURCH VOR-EINSTELLUNG	VORBEREITUNG	ABGLEICHSPUNKTE	ABGLEICHSVERFAHREN
	ANSCHLUSS	FREQUENZ				
			UKW-ZF-ABGLEICH			
5	—	Kein Signal	100.1 MHz	Ein Gleichstromrörenvoltmeter zwischen TP102 und TP103 über eine Drosselspule verbinden. (Siehe Abb. 7)	T102 (Diskriminator FT)	Den Kern von T102 so justieren, daß die gemessene Spannung im signallosen Modus 0V im 300mV Bereich beträgt.
			UKW-HF-ABGLEICH			
6	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	87.9 MHz	87.9 MHz	Zwischen TP1 und Erdung Gleichstrom-Voltmeter schließen.	L10 (Osc. Spule)	L10 so justieren, daß die vom Gleichstrom-Voltmeter gemessene Spannung 4.1V ± 0.1V beträgt.
7		90.1 MHz (400 Hz Modulat., 100%)	90.1 MHz	Oszilloskop über den Ausgang "OUTPUT" schließen.	L6 (HF Det. Spule 1) L8 (HF Det. Spule 2) L1 (Ant. Spule)	1. Einen schwachen Eingang geben, bei dem Geräusch in der Ausgangswellenform enthalten wird. 2. So einstellen, daß die Ausgangswellenform vertikal symmetrisch wird. (Abb. 8) 3. Die Einstellung von (7) und (8) wiederhoten, bis die Frequenz mit der Skala übereinstimmt.
8		106.1 MHz (400 Hz Modulat., 100%)	106.1 MHz	Oszilloskop über den Ausgang "OUTPUT" schließen.	CT7 (Osc. Trimmer)	
			ABGLEICH AUF MIN. VERZERRUNG IN STELLUNG UKW-MONO			
9	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen.	100.1 MHz (400 Hz Modulat., 100%)	100.1 MHz	* Ein Gleichstromrörenvoltmeter zwischen TP102 und TP103 über eine Drosselspule verbinden. * Verzerrungsmesser an rechten und linken kanäle Ausgangsklemme "OUTPUT"	T102 (Diskriminator FT) T103 (Diskriminator FT)	1. Den Kern von T102 so justieren, daß die gemessene Spannung im signallosen Modus 0V im 300mV Bereich beträgt. 2. T103 Kern für minimale Verzerrung der rechten und linken Kanäle justieren.
			UKW-MPX-PILOTABGLEICH (VCO)			
10	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. (Mono-Signal)	100.1 MHz (Unmodulierte Welle)	100.1 MHz	Signal frequenzmesser an TP302 schließen. (durch 100kΩ)	VR301 (VCO)	1. Den UKW Muting/UKW-Betriebsartschalter auf "on/auto" einstellen. 2. VR301 so abgleichen, daß Ausgangsfrequnz von TP302 19 kHz ± 30 Hz.
			KONTROLL-BANDPASSFILTER-ABGLEICH			
11	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. (60 dB, pilot 10% moduliertes stereosignal anlegen.)	100.1 MHz (Unmodulierte Welle)	100.1 MHz	Wechselstrom Röhrenvoltmeter an Klemmen TP301 anschließen.	L302 L303	1. Den UKW Betriebsartschalter auf "auto" einstellen. 2. Auf max. Ausgang abgleichen.
			KONTROLL-AUFLOSEN-ABGLEICH			
12	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. (60 dB, pilot 10% moduliertes stereosignal anlegen.)	100.1 MHz (Unmodulierte Welle)	100.1 MHz	Oszillograph an Klemmen TP303 anschließen.	L303 VR303	1. Den UKW Betriebsartschalter auf "auto" enstellen. 2. VR303 und L303 wiederholt justieren, so daß die Wellenform so wird, wie in Abb. 9 gezeigt, wenn die Ausgangsleistung von TP303 minimal ist.
			PHASENSCHIFTER ABGLEICH			
13	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. (60 dB, pilot 10% moduliertes Stereo-Signal anlegen.)	100.1 MHz (400 Hz Modulat., 100%) L-Betriebsart	100.1 MHz	Wechselstromvoltmeter an L-Kanal Ausgangsklemme "OUTPUT" schließen.	VR302	1. Den UKW Betriebsartschalter auf "auto". einstellen. 2. Auf max. Ausgang abgleichen.

Nr.	FM (UKW) MESSENDER		ANZEIGE-FREQUENZ DURCH VOR-EINSTELLUNG	VORBEREITUNG	ABGLEICHSPUNKTE	ABGLEICHSVERFAHREN
	ANSCHLUSS	FREQUENZ				
	STEREO-VERZERRUNGSABGLEICH					
14	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. (Stereo-Pilotsignal 10% moduliert.)	100.1 MHz (400 Hz Modulat., 100%) L-Betriebsart	100.1 MHz	Tiefpaßfilter (fc = 15 ∼ 19 kHz) über Verzerrungsmesser an Ausgangsklemme "OUTPUT" des Gerätes schließen.	T101 (IFT)	1. Den UKW Muting/UKW-Betriebsartschalter auf "on/auto" einstellen. 2. Den schon eingestellten T101 erneut, innerhalb von ± 90° von der voreingestellten Kernposition einstellen, sodaß die Verzerrung des linken Kanals minimalisiert wird. 3. Die Schritte 5, 7, 8 und 9 noch einmal überprüfen.
	TRENNUNG-ABGLEICH					
15	Meßsender über eine Kunstantenne an den UKW-Antenneneingang eingang schließen. (Stereo-Pilotsignal 10% moduliert.)	100.1 MHz (400 Hz Modulat., 100%) L-order R-Betriebsart)	100.1 MHz	Tiefpaßfilter (fc = 15 ∼ 19 kHz) über Wechselstromvoltmeter an Ausgangsklemme "OUTPUT" des Gerätes schließen.	VR401	1. Den UKW Muting/UKW-Betriebsartschalter auf "on/auto" einstellen. 2. VR401 auf minimale Anzeige des R-Ausgangs bei Stereo-modulator in L (L-Kanal-modulation) Modus, und auf minimale Anzeige des L-Ausgangs in R-Modus abgleichen.
	ABGLEICHEN DES SIGNALMETER-LED (LICHTERZEUGENDE DIODE)-ANZEIGERS					
16	Meßsender über eine Kunstantenne an den UKW-Antennenein-schließen. Meßsender auf 42 dB einstellen.	100.1 MHz (400 Hz Modulat., 100%)	100.1 MHz	Signalmeter-LED	VR501 (Metervolumen)	Unter Beobachtung der Signalmeter-LED VR501 so justieren, daß der Anzeiger am 5. fast aufzuleuchten beginnt.
	UKW-SIGNALPEGELTASTE					
17	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. (54 dB in den Antenneneingang leiten.)	100.1 MHz (400 Hz Modulat., 100%)	100.1 MHz	—	VR502	1. Den UKW-Signalpegelanzeiger-Tastenschalter drücken und VR502 so justieren, daß 54 dB angezeigt wird. 2. Die Eingangsleistung auf 30 dB reduzieren und dann langsam auf 54 db erhöhen. 3. Überprüfen, daß dann 54 dB angezeigt wird. Falls der Anzeigewert nicht 54 dB beträgt, erneut justieren.
	UKW-ABSTIMMANZEIGE-ABGLEICH					
18	Meßsender über eine Kunstantenne an den UKW-Antenneneingang schließen. (6.0 dB in den Antenneneingang leiten.)	100.1 MHz (400 Hz Modulat., 100%)	100.1 MHz	—	VR101	1. Den UKW Betriebsartschalter auf "off". 2. VR101 zuerst entgegen dem Uhrzeigersinn drehen, und dann langsam im Uhrzeigersinn drehen, so daß die Quarz-Verriegelungs-Anzeigelampen auf leuchten.

■ INSTRUCTIONS DE REGLAGE Français

- La bobine (L301) a déjà été mise au point et ne nécessite plus de réglage.
- Régler le sélecteur d'attribution AM sur la position "9kHz".

REGLAGE DE AM

Réglage et équement utilisé

1. Voltmètres électronique de courant altèrnatif et de courant continu (VTVM)
2. Générateur du signal AM (AM-SG)
3. Conservel la tension du secteur à la tension nominale.
4. Le signal du générateur ne doit pas étre plus élevé qu'il n'est nécessaire à obtenir une lecture en sortie.
5. Régler la position de la bobine (L201) de l'antenne en utilisant un tournevis de telle sorte qu'alle soit environ à 7cm de la plaque arriére.
6. Utiliser un tournevis non-métallique pour la réglage.
7. Sélecteur de gamme . . . . . AM

No.	AM GENERATEUR		FREQUENCE D'AFFICHAGE PAR PREREGLAGE	PREPARATIONS	ELEMENTS REGLES	PROCEDURE DE REGLAGE
	BRANCHEMENT	FREQUENCE				
	REGLAGE DE FI-AM					
1	Brancher le AM-SG à la borne de l'antenne AM par un condensateur de 200pF. Commun au châssis. (Entrée sous puissante)	450kHz (modulé à 30% par 400 Hz)	Point sans signal	C.A. Voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	T203 (1 transfo F1) T204 (2 transfo F1)	Régler la fréquence d'entrée et les points de réglage de telle sorte que la sortie devienne maximale.
	REGLAGE DE RF-AM					
2	Brancher le AM-SG à la borne de l'antenne AM par un condensateur de 200pF. Commun au châssis. (Entrée faible)	522 kHz (modulé à 30% par 400 Hz)	522 kHz	Brancher le voltmètre à courant continu entre TP201 et la prise de terre.	L202 (Bobine Osc.)	Régler L202 de telle sorte que le voltage mesuré par la voltmètre à courant continu, soit de 1.0V ± 0.05V.
3		612 kHz (modulé à 30% par 400 Hz)	612 kHz	C.A. Voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	L201 (Bobine Ant.)	1. Régler au maximum de signal de sortie. 2. Régler le noyau ferrite de L201 à l'aide d'un tournevis.
4		1503 kHz (modulé à 30% par 400 Hz)	1503 kHz	C.A. Voltmètre électronique ou oscilloscope sur prise de sortie de l'appareil.	CT201 (Trimmer Ant.)	1. Régler au maximum de signal de sortie. 2. Refaire les étapes (3) et (4) jusqu'à ce que le fréquence s'aligne correctement avec l'affichage du cadran.

REGLAGE DE FM

Equipment utilisé

1. Générateur du signal FM (FM-SG)
2. Commande de réglage stéréophonique (ou vu-mètre de séparation).
3. Jauge de distorsion.
4. Oscilloscope.
5. Voltmètres électronique de courant alternatif et de courant continu (VTVM).
6. Compteur de fréquence (19kHz et 108MHz mesurable).
7. Antenne fictive FM, 75Ω ohms(Fig. 6)

Préparation du générateur de signal FM (FM-SG)

1. Brancher la commande de réglage stéréophonique à FM-SG.
2. Alimenter la sortie SG à la borne de l'antenne de l'appareil, par l'antenne fictive FM, 75 ohms.
3. L'entrée standard de l'appareil est de 60 dB (1mV), 400Hz, 100% de modulation (à cause de l'utilisation de l'antenne fictive, la sortie SG doit être de plus 12 dB (IHF). Ce qui signifie que guand l'entrée est de 60 dB, la sortie SG doit être de 72 dB.)

Conditions de l'appareil

1. Placer le sélecteur de l'antenne FM sur la position "normal".
2. Sélecteur d'entrée sur la position "FM".
3. Commutateur de mode FM sur la position "auto".
4. Commutateur d'accord silencieux FM du niveau de synthonisation FM sur la position "off/standard".
5. Commutateur du sélecteur (affichage) indicateur de signaux/multivoies sur la position "signal".

No.	FM GENERATEUR		FREQUENCE D'AFFICHAGE PAR PREREGLAGE	PREPARATIONS	ELEMENTS REGLES	PROCEDURE DE REGLAGE
	BRANCHEMENT	FREQUENCE				
	REGLAGE DE FI-FM					
5	—	Sans Signal	100.1MHz	Brancher le voltmètre électronique a c.c. aux bornes TP102 et TP103 . (Voir la Fig. 7)	T102 (Transfor FI discri.)	Régler le noyau T102 de telle sorte que le voltage mesuré dans le mode sans signal, soti de 0V dans la gamme des 300mV.
	REGLAGE DE RF-FM					
6	Branchez sur la prise d'antenne FM à traves une antenne fictive FM	87.9 MHz	87.9 MHz	Brancher le voltmètre à courant continu entre TP1 et la prise de terre.	L10 (Bobine Osc.)	Régler L10 de telle sorte que le voltage mesuré par le voltmètre à courant continu soit de 4.1V ± 0.1V.
7		90.1 MHz (modulé à 100% par 400 Hz)	90.1 MHz	Oscilloscope sur prise de sortie du tuner.	L6 (1er détecteur) L8 (2e détecteur) L1 (Bobin Ant.)	1. Appliquer une entrée faible de telle sorte que le parasite soit compris dans la forme de l'onde de sortie. 2. Faire le réglage de telle sorte que la forme de l'onde de sortie soit verticalement symétrique. (Voir Fig. 8) 3. Refaire les réglages (7) et (8) jusqu'à ce que la fréquence corresponde correctement avec l'échells du cadran.
8		106.1 MHz (modulé à 100% par 400 Hz)	106.1 MHz	Oscilloscope sur prise de sortie du tuner.	CT7 (Trimmer Osc.)	

No.	FM GENERATEUR		FREQUENCE D'AFFICHAGE PAR PREREGLAGE	PREPARATIONS	ELEMENTS REGLES	PROCEDURE DE REGLAGE
	BRANCHEMENT	FREQUENCE				
	REGLAGE DE LA DISTORSION FM EN MONO					
9	Branchez sur la prise d'antenne FM à traves une antenne fictive FM	100.1 MHz (modulé à 100% par 400 Hz)	100.1 MHz	*Brancher le voltmètre électronique a.c.c. aux bornes TP102 et TP103. (Voir la Fig. 7) *Brancher le compteur de distorsion à la borne de sortie (OUTPUT) du canal gauche et droit de l'appareil.	T102 (Transfo FI discri.) T103 (Transfo FI discri.)	1. Régler le noyau T102 de telle sorte que le voltage mesuré dans le mode sans signal, soti de 0V dans la gamme des 300mV. 2. Régler le noyau T103 de telle sorte que la distorsion des canaux droit et gauche soit la puls faible.
	REGLAGE (VCO) PILOTE MULTIPLEX FM					
10	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. (Signal monoscoustique)	100.1 MHz (Non modulé)	100.1 MHz	Brancher le compteur de fréquence à TP302. (Par l'intermédiaire de 100kΩ)	VR301	1. Placer le commutateur de réglage silencieux de FM/mode FM sur "on/auto". 2. Régler VR301 de telle sortie que la fréquence de sortie de TP302 soit de 19 kHz ± 30 Hz.
	REGLAGE FILTRE PILOTE PASS-BANDE					
11	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. (Appliquer un signal stéréo modulé, signal pilote à 10% de 60 dB)	100.1 MHz (Non modulé)	100.1 MHz	Brancher un voltmètre à courant alternatif à TP301	L302 L303	1. Placer la commutateur de mode de FM sur la position "auto". 2. Régler au maximum de signal de sortie.
	ANNULATION DU SIGNAL PILOTE					
12	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. (Appliquer un signal stéréo modulé, signal pilote à 10% de 60 dB)	100.1 MHz (Non modulé)	100.1 MHz	Brancher le voltmètre à courant alternatif et l'oscilloscope à TP303	L303 VR303	1. Placer le commutateur de mode de FM sur la position "auto". 2. Adjuster de façon répétée VR303 et L303 de façon à ce que la forme d'onde soit telle qu'elle est montrée à la Fig. 9 lorsque la sortie de TP303 est minimale.
	REGLAGE DU DEPHASEUR					
13	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. (Appliquer un signal stéréo modulé, signal pilote à 10% de 60 dB)	100.1 MHz (modulé à 100% par 400 Hz) (Mode G)	100.1 MHz	Brancher un voltmètre à courant continu à la borne de sortie du canal gauche.	VR302	1. Placer la commutateur de mode de FM sur la position "auto". 2. Régler au maximum de signal de sortie.
	REGLAGE DE LA DISTORSION STEREO					
14	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. (Signal stéréo pilote à 10% de modulation)	100.1 MHz (modulé à 100% par 400 Hz) (Mode G)	100.1 MHz	Brancher le filter passe-bas (fc = 15 ~ 19 kHz) à la borne de sortie (OUTPUT) de l'appareil par un compteur de distortion.	T101	1. Placer le commutateur de mode de FM sur la position "auto". 2. Rerégler le T101 déjà réglé, à ±90% de la position préréglée du noyau de telle sorte que la distorsion du canal gauche soit minimale. 3. Revérifier les étapes 5, 7, 8 et 13.
	REGLAGE DE LA SEPARATION DES CANAUX					
15	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. (Signal stéréo pilote à 10% de modulation)	100.1 MHz (modulé à 100% par 400 Hz) (Mode G ou D.)	100.1 MHz	Brancher le filter passe-bas (fc = 15 ~ 19 kHz) à la borne de sortie (OUTPUT) de l'appareil par un voltmètre à courant alternatif.	VR401	1. Placer le commutateur de mode de FM sur la position "auto". 2. Régler VR401 de telle sorte que la sortie droite soit minimale quand la commande d'accord stéréophonique est dans le mode gauche (modulation du canal gauche) et que la sortie gauche soit minimale dans mode droit.

No.	FM GENERATEUR		FREQUENCE D'AFFICHAGE PAR PREREGLAGE	PREPARATIONS	ELEMENTS REGLES	PROCEDURE DE REGLAGE
	BRANCHEMENT	FREQUENCE				
ALIGNEMENT DE L'INDICATEUR DE SIGNAL DE LA DIODE A EMISSION DE LUMIERE (DEL)						
16	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. (Niveau de sortie du générateur 42 dB)	100.1 MHz (modulé à 100% par 400 Hz)	100.1 MHz	DEL du compteur à signal de l'aiguille du cadran.	VR501 (Registor variable du compteur)	Reglez VR501 en observant la DEL du compteur à signal afin que l'indicateur au 5 ème est à presque tourner.
REGLAGE INDICATEUR D'INTENSITE DES SIGNAUX FM						
17	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. (Niveau de sortie du générateur 54 dB)	100.1 MHz (modulé à 100% par 400 Hz)	100.1 MHz	—	VR502	1. Appuyer sur le commutateur à touche de l'indicateur de niveau de transmission FM, et régler VR502 de façon à ce que 54 dB soit affiché. 2. Diminuer l'entrée à 30 dB, puis augmenter lantement jusqu'à 54 dB. 3. S'assurer que l'affichage soit alors de 54 dB. Si 54 dB n'est pas affiché, l'ajuster à nouveau.
REGLAGE DE L'INDICATEUR DE BLOCAGE PAR QUARTS FM						
18	Branchez sur la prise d'antenne FM à travers une antenne fictive FM. (Niveau de sortie du générateur 6.0 dB)	100.1 MHz (modulé à 100% par 400 Hz)	100.1 MHz	—	VR101	1. Placer la commutateur de mode de FM sur la position "off". 2. Tourner tout d'abord VR101 dans le sens inverse des aiguilles d'une montre, puis lentement dans le sens des aiguilles d'une montre de façon à ce que l'indicateur de blocage par puartz s'éclaire.

■ REPLACEMENT PARTS LIST...Electrical Parts

Notes: 1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.

2. Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Ref. No.		Part No.	Part Name & Description
INTEGRATED CIRCUITS			
IC101		SVIM5215L	IC, FM IF Amplifier
IC103		RVIUPC1018CF	IC, FM IF & AM Converter
IC104		SVIUPC1167C2	IC, FM IF Detector
IC301		SVIUPC1161C	IC, FM MPX
IC302, 401, 501		AN6552F	IC, Multipath, Buffer
IC303		SVIUPD4066C	IC, Peak Sampling Switch
IC502		AN6876	IC, LED Driver
IC503		AN6552F	IC, Loop Filter
IC901		SVID1704C514	IC, Micro-Computer
IC902		SVIUPB553C–E	IC, Pre-Scaler
IC903		SVIMSL915RS	IC, FL Driver
TRANSISTORS			
Q1		3SK74–L1	Transistor, FM RF Amplifier
Q3		**2SC1674–M**	Transistor, FM Mixer
Q4, 5, 6		**2SC1675–L**	Transistor, FM Oscillator, Buffer
Q101, 102, 103		**2SC829–C**	Transistor, Switching
Q104, 301, 501 601 ~ 608, 611 613 ~ 616, 902 ~ 905		**2SC945–Q**	Transistor, Phase Shift, AM Amplifier Switching, Quartz Lock Lamp Driver Muting, Loop Filter
Q502, 503, 609 612,703,704,901		**2SA733–P1**	Transistor, AM Amplifier, Switching, Muting
Q701		2SD762–O	Transistor, Regulator
Q705		2SC1815–Y	Transistor, Regulator

Ref. No.		Part No.	Part Name & Description
DIODES			
D1, 5, 6, 7		SVDSVC211	Diode, Variable Capacitor (for FM)
D101, 102, 202 504, 921		**20A90**	Diode, Switching
D103, 203, 503 542, 544, 605 607, 608, 610 612 ~ 618, 711 901, 902, 904 905, 907 911 ~ 920		**MA162A**	Diode, Switching
D201		SVDBB312E	Diode, Variable Capacitor (for AM)
D506 ~ 510		SVDGL–9PR9	Light Emitting Diode, Red
D511		SVDGL–9HY9	Light Emitting Diode, Yellow
D513		**MA27A2**	Diode
D537		SVDMZ416	Diode, 16V Zener
D543		**MA27A1**	Diode
D701 ~ 704	⚠	**SVDSR1K2**	Rectifier
D705		**MA162A**	Diode
D706		SVDMZ333A	Diode, 33V Zener
D707		**SVDEQA0113RA**	Diode, 13V Zener
D709		**RVDRD6R2EB**	Diode, 6.2V Zener
D710		MA1064A	Diode, 6.4V Zener
D908		**MA162A**	Diode
D910, 923		**MA162A**	Diode

COILS and TRANSFORMERS

Ref. No.		Part No.	Part Name & Description
L1		SLA4P43	Coil, FM Antenna
L6		SLD4P43	Coil, FM RF Detector
L7, 11		SLQAN40G1	Coil, Choke
L8		SLD4P45	Coil, FM RF Detector
L9		RLQY15G5–Y	Coil, Choke
L10		SLO4P73	Coil, FM Oscillator
L101, 901		SLQX101–2D	Coil, Choke
L201		SLF2D73	Coil, AM Bar Antenna
L202		SLO2C29–P	Coil, AM Oscillator
L203		SLI2C127	Coil, AM IF
L204		SLI2C413	Coil, AM IF
L301		SLM1C47–P	Coil, LPF
L302, 303		SLM1C57–Z	Coil, BPF
T101		SLI4C109	Transformer, FM IF
T102		SLI4C529–Z	Transformer, FM IF
T103		SLI4C531–Z	Transformer, FM IF
T701	⚠	SLT5J121–1W	Transformer, Power Source

CERAMIC FILTERS

Ref. No.		Part No.	Part Name & Description
CF101, 105		SVFE107MX2–A	Ceramic Filter, FM 10.7MHz Red
		SVFE107MX2–D	Ceramic Filter, FM 10.65MHz Black
CF102, 103		SVFE107MZ2–A	Ceramic Filter, FM 10.7MHz Red
		SVFE107MZ2–D	Ceramic Filter, FM 10.65MHz Black
CF104		SVFE107MM–A	Ceramic Filter, FM 10.7MHz Red
		SVFE107MM–D	Ceramic Filter, FM 10.65MHz Black
			(Use pair ranks as same as CF101, CF102, CF103, CF104 and CF105)
CF201		SVFSFP450HT	Ceramic Filter, AM450kHz

VARIABLE RESISTORS

Ref. No.		Part No.	Part Name & Description
VR101, 303		**EVTS3MA00B54**	Pilot Cancel and Quartz Lock LED Adjustment, 50kΩ (B)
VR301		**EVTS3MA00B53**	VCO Adjustment, 5kΩ (B)
VR302		**EVTS3MA00B14**	Phose Shift Adjustment, 10kΩ (B)
VR401		**EVTS3MA00B15**	Separation Adjustment, 100kΩ (B)
VR501		**EVTS3MA00B14**	Signal LED Adjustment, 10kΩ (B)
VR502		**EVTS0AA00B14**	Signal Strength Level Adjustment, 10kΩ (B)

CRYSTAL

Ref. No.		Part No.	Part Name & Description
X901		SVQ43U452	Crystal, 4.5MHz Counter Oscillator

VARIABLE CAPACITORS

Ref. No.		Part No.	Part Name & Description
CT7		ECV1ZW06X32E	Trimmer, FM Oscillator
CT201		SVCTY122D221	Trimmer, AM Antenna

COMPONENT COMBINATIONS

Ref. No.		Part No.	Part Name & Description
Z201		EXRP203Z104T	Component Combination, 0.02μF, 100kΩ
Z901		EXBP87104K	Component Combination, 100kΩ (x 7)
Z902		EXFP7331MW	Component Combination, 330pF, (x 7)

THERMISTER

Ref. No.		Part No.	Part Name & Description
TH101		ERTD2FHL103S	Thermister, Thermal Compensation, 10kΩ

LAMP

Ref. No.		Part No.	Part Name & Description
PL503	⚠	XAMR68S8	Lamp, 0.07A (8V)

FLUORESCENT DISPLAY TUBE

Ref. No.		Part No.	Part Name & Description
FL		SAD7MT29ZA	Flurescent Display Tube

LIQUID ELECTROLYTE DOUBLE LAYER CAPACITOR

Ref. No.		Part No.	Part Name & Description
C717 ~ 719		EECW1R8A3R3S	Liquid Electrolyte Double Leyer 3.3F (1.8V)

SWITCHES

Ref. No.		Part No.	Part Name & Description
S1 ~ 5		SSH537	Switch, FM Tuning Level, FM Muting Display Mode, FM Mode, FM IF Select
S6–1 ~ 6–11 7–1 ~ 7–3		SSG7	Switch, Preset, FM and AM Mode, FM Signal Strength Level Call, Tuning, Memory
S8	⚠	SSH183	Switch, Power Source
S10		ESD14116	Switch, Allocation
S12	⚠	ESE372	Switch, Voltage Adjustor

RESISTORS

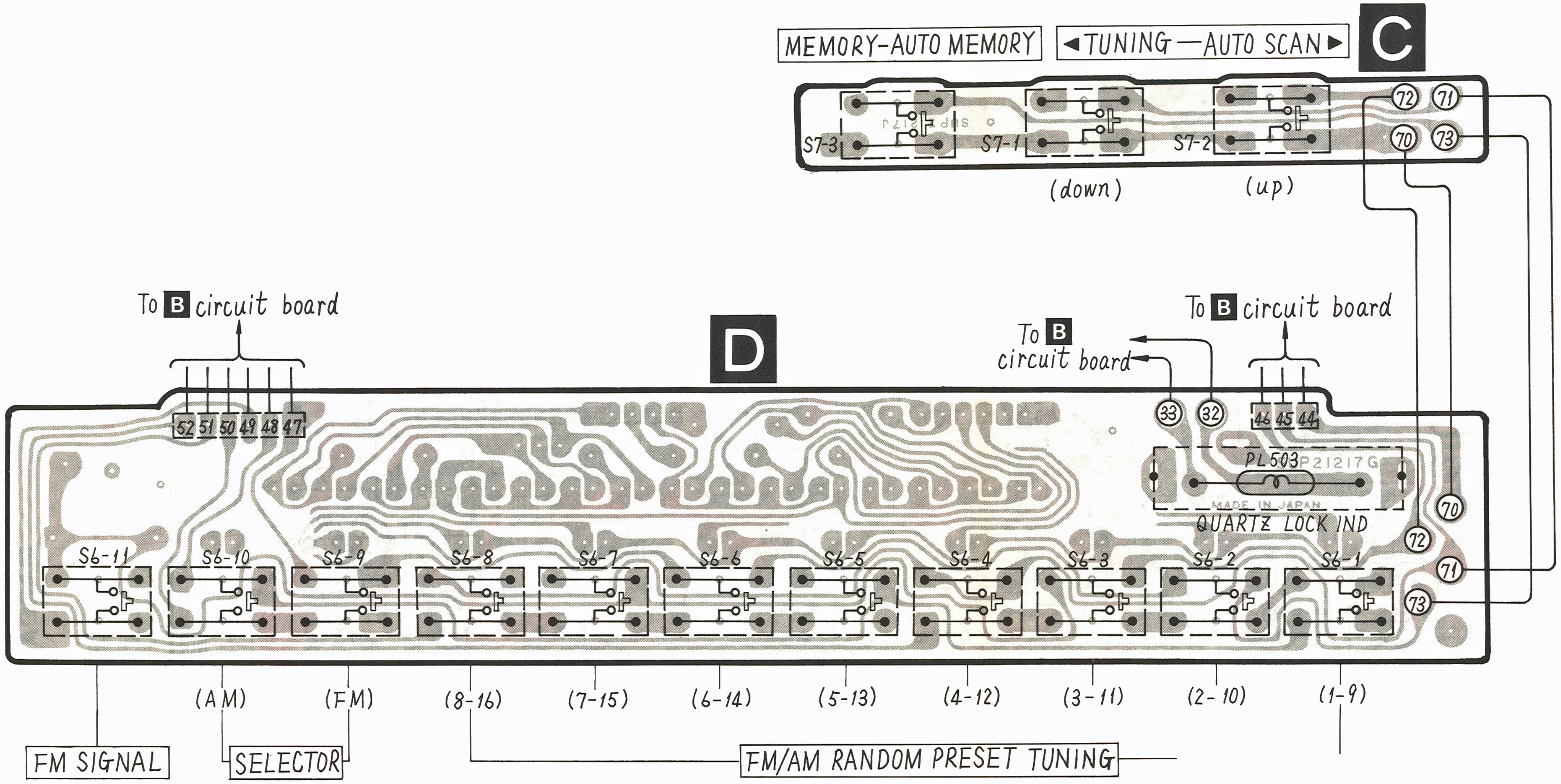
Ref. No.		Part No.	Part Name & Description
R1		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R2		**ERD25TJ823**	Carbon, 1/4W, 82kΩ, ± 5%
R3		**ERD25TJ184**	Carbon, 1/4W, 180kΩ, ± 5%
R4		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R11		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R12		**ERD25TJ683**	Carbon, 1/4W, 68kΩ, ± 5%
R14		**ERD25FJ100**	Carbon, 1/4W, 10Ω, ± 5%
R15, 16		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R18		**ERD25FJ822**	Carbon, 1/4W, 8.2kΩ, ± 5%
R19		**ERD25TJ333**	Carbon, 1/4W, 33kΩ, ± 5%
R20		**ERD25FJ331**	Carbon, 1/4W, 330Ω, ± 5%
R21		**ERD25FJ221**	Carbon, 1/4W, 220Ω, ± 5%
R22		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R23		**ERD25TJ333**	Carbon, 1/4W, 33kΩ, ± 5%
R24		**ERD25FJ221**	Carbon, 1/4W, 220Ω, ± 5%
R25		**ERD25FJ152**	Carbon, 1/4W, 1.5kΩ, ± 5%
R26		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R27		**ERD25FJ222**	Carbon, 1/4W, 2.2kΩ, ± 5%
R28		**ERD25FJ221**	Carbon, 1/4W, 220Ω, ± 5%
R29		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R30		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ± 5%
R34		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ± 5%
R101		**ERD25FJ470**	Carbon, 1/4W, 47Ω, ± 5%
R102		**ERD25FJ331**	Carbon, 1/4W, 330Ω, ± 5%
R104		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ± 5%
R105		**ERD25FJ471**	Carbon, 1/4W, 470Ω, ± 5%
R106		**ERD25FJ331**	Carbon, 1/4W, 330Ω, ± 5%
R107		**ERD25FJ681**	Carbon, 1/4W, 680Ω, ± 5%
R108, 109		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R110. 111		**ERD25TJ333**	Carbon, 1/4W, 33kΩ, ± 5%
R112		**ERD25FJ222**	Carbon, 1/4W, 2.2kΩ, ± 5%
R113		**ERD25FJ331**	Carbon, 1/4W, 330Ω, ± 5%
R117		**ERD25FJ331**	Carbon, 1/4W, 330Ω, ± 5%
R119		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R120		**ERD25TJ333**	Carbon, 1/4W, 33kΩ, ± 5%
R121	⚠	**ERD50FJ470**	Carbon, 1/2W, 47Ω, ± 5%
R122		**ERD25FJ682**	Carbon, 1/4W, 6.8kΩ, ± 5%
R123		**ERD25TJ183**	Carbon, 1/4W, 18kΩ, ± 5%
R124		**ERD25FJ182**	Carbon, 1/4W, 1.8kΩ, ± 5%
R125		**ERD25TJ333**	Carbon, 1/4W, 33kΩ, ± 5%
R126		**ERD25FJ332**	Carbon, 1/4W, 3.3kΩ, ± 5%
R127		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R128		**ERD25FJ181**	Carbon, 1/4W, 180Ω, ± 5%
R129, 130		**ERD25FJ471**	Carbon, 1/4W, 470Ω, ± 5%
R131		**ERD25FJ272**	Carbon, 1/4W, 2.7kΩ, ± 5%
R132		**ERD25TJ393**	Carbon, 1/4W, 39kΩ, ± 5%
R133		**ERD25FJ101**	Carbon, 1/4W, 100Ω, ± 5%
R134		**ERD25FJ151**	Carbon, 1/4W, 150Ω, ± 5%
R201		**ERD25FJ471**	Carbon, 1/4W, 470Ω, ± 5%
R202		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R203		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R204		**ERD25TJ183**	Carbon, 1/4W, 18kΩ, ± 5%
R206		**ERD25FJ681**	Carbon, 1/4W, 680Ω, ± 5%
R207		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R208		**ERD25FJ471**	Carbon, 1/4W, 470Ω, ± 5%
R209		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ± 5%
R210		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R212		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R213, 214		**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ± 5%
R215		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R301		**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ± 5%

Ref. No.		Part No.	Part Name & Description
R302		**ERD25TJ153**	Carbon, 1/4W, 15kΩ, ± 5%
R303, 304		**ERD25FJ392**	Carbon, 1/4W, 3.9kΩ, ± 5%
R305		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R306		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ± 5%
R307, 308		**ERD25FJ682**	Carbon, 1/4W, 6.8kΩ, ± 5%
R309		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ± 5%
R310		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R311, 312		**ERD25TJ153**	Carbon, 1/4W, 15kΩ, ± 5%
R313		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R314		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ± 5%
R315		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R316		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R317		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ± 5%
R318		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R319		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ± 5%
R320		**ERD25FJ122**	Carbon, 1/4W, 1.2kΩ, ± 5%
R321		**ERD25FJ392**	Carbon, 1/4W, 3.9kΩ, ± 5%
R322, 323		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R324, 325		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R326		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ± 5%
R327		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R328		**ERD25FJ272**	Carbon, 1/4W, 2.7kΩ, ± 5%
R329		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R401, 402		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R403, 404		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ± 5%
R405, 406		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R407, 408		ERO25CKF3301	Metal Film, 1/4W, 3.3kΩ, ± 1%
R409		**ERD25TJ823**	Carbon, 1/4W, 82kΩ, ± 5%
R411, 412		**ERD25FJ181**	Carbon, 1/4W, 820Ω, ± 5%
R413, 414		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R501		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R502		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R503		**ERD25FJ332**	Carbon, 1/4W, 3.3kΩ, ± 5%
R504		**ERD25TJ333**	Carbon, 1/4W, 33kΩ, ± 5%
R505		**ERD25FJ222**	Carbon, 1/4W, 2.2kΩ, ± 5%
R506		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ± 5%
R507		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R508		**ERD25TJ683**	Carbon, 1/4W, 68kΩ, ± 5%
R509		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R510, 511		**ERD25TJ683**	Carbon, 1/4W, 68kΩ, ± 5%
R512		**ERD25FJ822**	Carbon, 1/4W, 8.2kΩ, ± 5%
R513		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R514		**ERD25TJ154**	Carbon, 1/4W, 150kΩ, ± 5%
R515		**ERD25FJ822**	Carbon, 1/4W, 8.2kΩ, ± 5%
R516		**ERD25TJ683**	Carbon, 1/4W, 68kΩ, ± 5%
R517, 518		**ERD25FJ392**	Carbon, 1/4W, 3.9kΩ, ± 5%
R519		**ERD25FJ561**	Carbon, 1/4W, 560Ω, ± 5%
R521		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R522		**ERD25FJ221**	Carbon, 1/4W, 220Ω, ± 5%
R525		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R531		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R533, 534		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R536		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R537		**ERD25FJ392**	Carbon, 1/4W, 3.9kΩ, ± 5%
R539		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R562		**ERD25FJ822**	Carbon, 1/4W, 8.2kΩ, ± 5%
R563		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ± 5%
R564		**ERD25TJ563**	Carbon, 1/4W, 56kΩ, ± 5%
R602		**ERD25FJ332**	Carbon, 1/4W, 3.3kΩ, ± 5%
R604		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R605		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R606		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R607, 608		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R609		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R610		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R612		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ± 5%
R613		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R615		**ERD25FJ272**	Carbon, 1/4W, 2.7kΩ, ± 5%
R616		**ERD25TJ474**	Carbon, 1/4W, 470kΩ, ± 5%
R617		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R618	⚠	**ERG1ANJ180**	Metal Oxide, 1W, 18Ω, ± 5%
R619		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R620		**ERD25TJ394**	Carbon, 1/4W, 390kΩ, ± 5%
R621		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R622		**ERD25TJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R623		**ERD25TJ223**	Carbon, 1/4W, 22kΩ, ± 5%
R624		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R625, 626		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R627, 628		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R629		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%

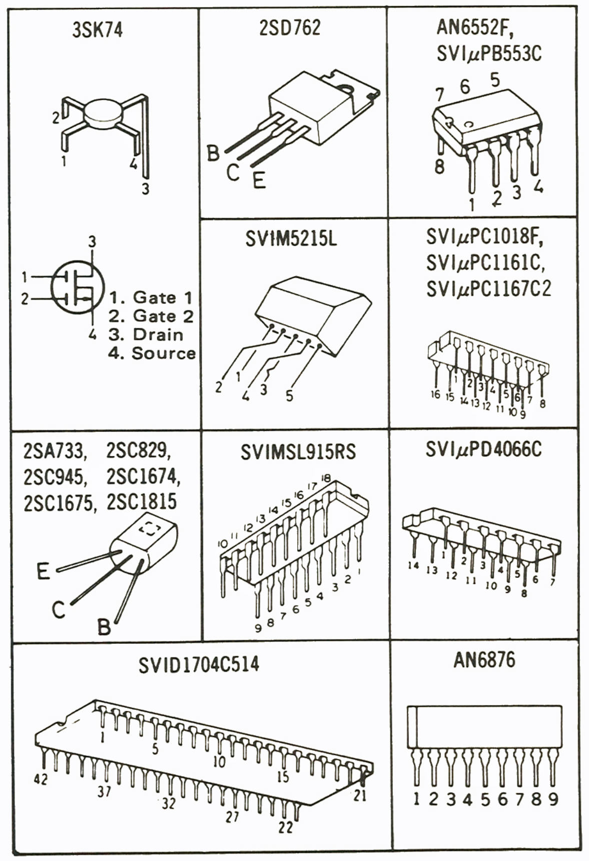
Ref. No.		Part No.	Part Name & Description
R630		**ERD25TJ563**	Carbon, 1/4W, 56kΩ, ± 5%
R633		**ERD25TJ473**	Carbon, 1/4W, 47kΩ, ± 5%
R634		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R635, 636		**ERD25TJ393**	Carbon, 1/4W, 39kΩ, ± 5%
R637		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ± 5%
R638		**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ± 5%
R639		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R641, 642		**ERD25TJ393**	Carbon, 1/4W, 39kΩ, ± 5%
R643, 644		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R646		**ERD25TJ563**	Carbon, 1/4W, 56kΩ, ± 5%
R647		**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ± 5%
R648		**ERD25TJ104**	Carbon, 1/4W, 100kΩ, ± 5%
R649		**ERD25FJ221**	Carbon, 1/4W, 220Ω, ± 5%
R650		**ERD25TJ333**	Carbon, 1/4W, 33kΩ, ± 5%
R701	⚠	**ERD25FJ330**	Carbon, 1/4W, 33Ω, ± 5%
R702	⚠	**ERD25FJ222**	Carbon, 1/4W, 2.2kΩ, ± 5%
R703	⚠	ERQ12HJ150	Fuse Type Metallic, 1/2W, 15Ω, ± 5%
R704, 705		**ERD25TJ563**	Carbon, 1/4W, 56kΩ, ± 5%
R707		**ERD25FJ152**	Carbon, 1/4W, 1.5kΩ, ± 5%
R708		**ERD25FJ101**	Carbon, 1/4W, 100Ω, ± 5%
R709		**ERD25FJ222**	Carbon, 1/4W, 2.2kΩ, ± 5%
R710		**ERD25FJ101**	Carbon, 1/4W, 100Ω, ± 5%
R711		**ERD25FJ682**	Carbon, 1/4W, 6.8kΩ, ± 5%
R712		**ERD25FJ222**	Carbon, 1/4W, 2.2kΩ, ± 5%
R713		**ERD25FJ101**	Carbon, 1/4W, 100Ω, ± 5%
R714		**ERD25FJ470**	Carbon, 1/4W, 47Ω, ± 5%
R716	⚠	ERQ12HJ101	Fuse Type Metallic, 1/2W, 100Ω, ± 5%
R901		**ERD25FJ152**	Carbon, 1/4W, 1.5kΩ, ± 5%
R902		**ERD25FJ392**	Carbon, 1/4W, 3.9kΩ, ± 5%
R903		**ERD25FJ562**	Carbon, 1/4W, 5.6kΩ, ± 5%
R904		**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ± 5%
R905		**ERD25FJ561**	Carbon, 1/4W, 560Ω, ± 5%
R906		**ERD25FJ471**	Carbon, 1/4W, 470Ω, ± 5%
R907		**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ± 5%
R908		**ERD25FJ472**	Carbon, 1/4W, 4.7kΩ, ± 5%
R909		**ERD25FJ682**	Carbon, 1/4W, 6.8kΩ, ± 5%
R910		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
R911		**ERD25FJ102**	Carbon, 1/4W, 1kΩ, ± 5%
R913		**ERD25FJ103**	Carbon, 1/4W, 10kΩ, ± 5%
CAPACITORS			
C1		ECCD1H390KC	Ceramic, 50V, 39pF, ± 10%
C2		**ECEA50Z3R3**	Electrolytic, 50V, 3.3μF
C3		ECCD1H030CC	Ceramic, 50V, 3pF, ±0.25pF
C4		ECKD1H102ZF	Ceramic, 50V, 0.001μF, $^{+80}_{-20}$%
C5		ECCD1H030CC	Ceramic, 50V, 3pF, ±0.25pF
C16		ECKD1H102MD	Ceramic, 50V, 0.001μF, ± 20%
C17		ECKD1H102ZF	Ceramic, 50V, 0.001μF, $^{+80}_{-20}$%
C18		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}$%
C19		ECCD1H040CC	Ceramic, 50V, 4pF, ±0.25pF
C20		ECKD1H102ZF	Ceramic, 50V, 0.001μF, $^{+80}_{-20}$%
C21		ECGN5R22K	Ceramic, 500V, 0.22pF, ± 10%
C22		ECCD1H050CC	Ceramic, 50V, 5pF, ±0.25pF
C23		ECCD1H030CC	Ceramic, 50V, 3pF, ±0.25pF
C24		ECCD1H050CC	Ceramic, 50V, 5pF, ±0.25pF
C25		ECCD1H020CC	Ceramic, 50V, 2pF, ±0.25pF
C26		ECCD1H181K	Ceramic, 50V, 180pF, ± 10%
C27, 28		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}$%
C29		ECCD1H060CC	Ceramic, 50V, 6pF, ±0.25pF
C31		ECCD1H080DC	Ceramic, 50V, 8pF, ± 0.5pF
C32		ECCD1H390KC	Ceramic, 50V, 39pF, ± 10%
C33		ECCD1H070DC	Ceramic, 50V, 7pF, ± 0.5pF
C34		ECKD1H102MD	Ceramic, 50V, 0.001μF, ± 20%
C35		ECCD1H040CC	Ceramic, 50V, 4pF, ±0.25pF
C36		ECKD1H102ZF	Ceramic, 50V, 0.001μF, $^{+80}_{-20}$%
C37		ECCD1H020CC	Ceramic, 50V, 2pF, ±0.25pF
C38		ECKD1H102ZF	Ceramic, 50V, 0.001μF, $^{+80}_{-20}$%
C101, 102		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}$%
C103, 104		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}$%
C108, 109		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}$%
C110		**ECEA50Z1**	Electrolytic, 50V, 1μF
C111, 112		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}$%
C113		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}$%
C114		ECCD1H101K	Ceramic, 50V, 100pF, ± 10%
C115		**ECEA50Z1**	Electrolytic 50V, 1μF
C116		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}$%
C117		**ECEA50Z1**	Electrolytic, 50V, 1μF
C118		**ECEA50ZR47**	Electrolytic, 50V, 0.47μF
C119, 120		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}$%

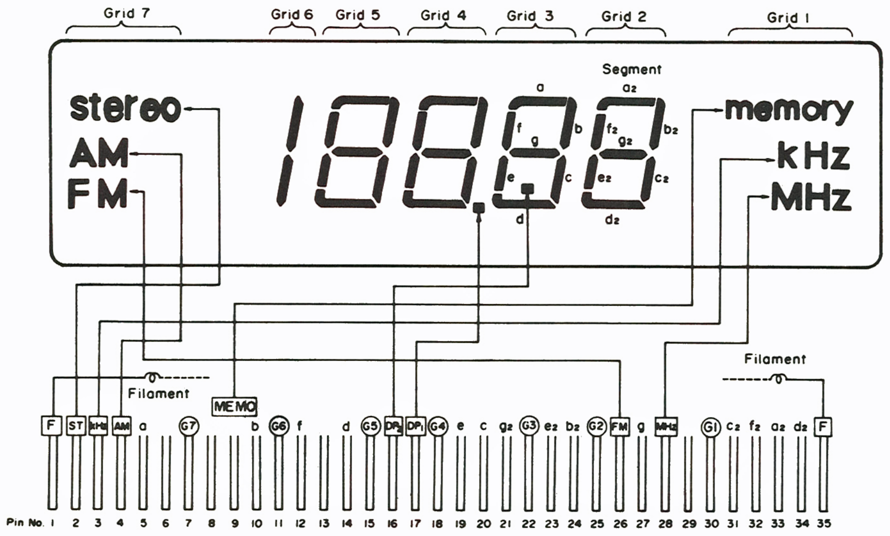
Continued on page 26

■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM


MEMORY-AUTO MEMORY
◄TUNING—AUTO SCAN►
C
S7-3
S7-1
S7-2
(down)
(up)
72
71
70
73
To B circuit board
D
To B circuit board
To B circuit board
52 51 50 49 48 47
33
32
46 45 44
PL503
QUARTZ LOCK IND
70
72
71
73
S6-11
S6-10
S6-9
S6-8
S6-7
S6-6
S6-5
S6-4
S6-3
S6-2
S6-1
(AM)
(FM)
(8-16)
(7-15)
(6-14)
(5-13)
(4-12)
(3-11)
(2-10)
(1-9)
FM SIGNAL
SELECTOR
FM/AM RANDOM PRESET TUNING

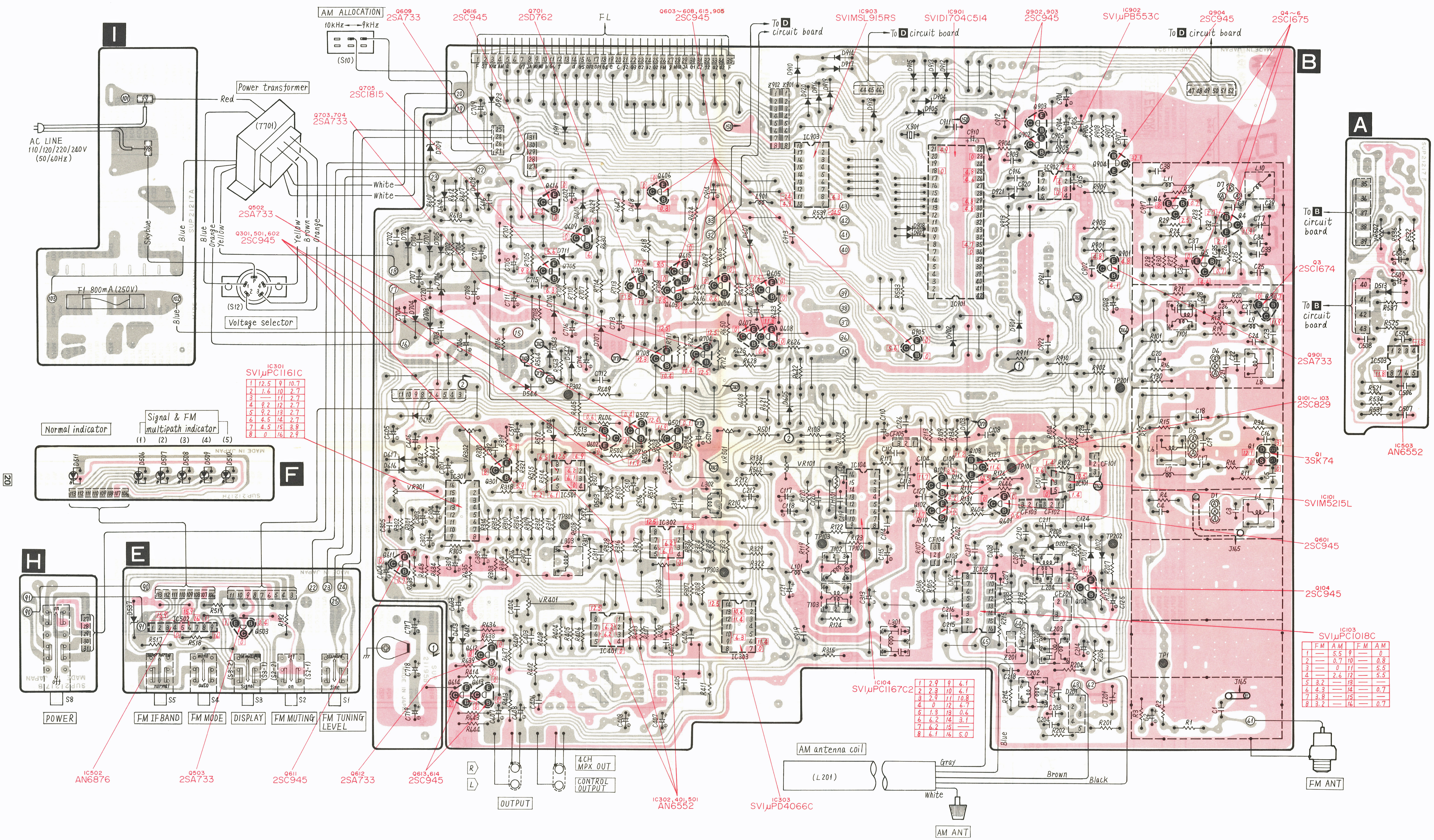
- **Terminal guide of transistors, diodes and IC's**


3SK74
2SD762
AN6552F,
SVIμPB553C
1. Gate 1
2. Gate 2
3. Drain
4. Source
B C E
SVIM5215L
SVIμPC1018F,
SVIμPC1161C,
SVIμPC1167C2
2SA733, 2SC829,
2SC945, 2SC1674,
2SC1675, 2SC1815
E
C
B
SVIMSL915RS
SVIμPD4066C
SVID1704C514
AN6876
1 2 3 4 5 6 7 8 9


Grid 7
Grid 6
Grid 5
Grid 4
Grid 3
Grid 2
Grid 1
Segment
stereo
AM
FM
memory
kHz
MHz
Filament
MEMO
F
ST
kHz
AM
a
G7
b
G6
f
d
G5
DP2
DP1
G4
e
c
g2
G3
e2
b2
G2
FM
g
MHz
G1
c2
f2
a2
d2
F
Pin No. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

■ CIRCUIT BOARD AND WIRING CONNECTION DIAGRAM

🟥 Ground (Earth) lines


I
AC LINE
110/120/220/240V
(50/60Hz)
Power transformer
Red
(T701)
White
White
Skyblue
Blue
Blue
Orange
Yellow
Yellow
Brown
Orange
F1 800mA (250V)
(S12)
Voltage selector
AM ALLOCATION
10kHz ←→ 9kHz
(S10)
Q609 2SA733
Q616 2SC945
Q701 2SD762
FL
Q603～608, 615, 905 2SC945
To D circuit board
IC903 SVIMSL915RS
IC901 SVIDI704C514
Q902, 903 2SC945
IC902 SVIμPB553C
Q904 2SC945
Q4～6 2SC1675
B
A
Q705 2SC1815
Q703, 704 2SA733
Q502 2SA733
Q301, 501, 602 2SC945
To B circuit board
Q3 2SC1674
Q901 2SA733
Q101～103 2SC829
Q1 3SK74
IC101 SVIM5215L
Q601 2SC945
Q104 2SC945
IC103 SVIμPC1018C
IC503 AN6552
IC301 SVIμPC1161C
Normal indicator
Signal & FM multipath indicator
(1) (2) (3) (4) (5)
F
MADE IN JAPAN
SUP2121H
H
E
POWER
S8
S5 S4 S3 S2 S1
FM IF BAND
FM MODE
DISPLAY
FM MUTING
FM TUNING LEVEL
normal
auto
Signal
on
fine
IC502 AN6876
Q503 2SA733
Q611 2SC945
Q612 2SA733
Q613, 614 2SC945
R
L
OUTPUT
4CH MPX OUT
CONTROL OUTPUT
IC302, 401, 501 AN6552
IC303 SVIμPD4066C
IC104 SVIμPC1167C2
AM antenna coil
(L201)
Gray
Blue
Brown
Black
White
AM ANT
FM ANT

IC301 SVIμPC1161C

1	12.5	9	10.7
2	1.6	10	2.7
3	—	11	2.7
4	9.2	12	2.7
5	9.2	13	2.7
6	4.5	14	2.7
7	4.5	15	3.8
8	0	16	2.9

IC104 SVIμPC1167C2

1	2.9	9	6.1
2	2.3	10	6.1
3	2.9	11	10.8
4	0	12	6.7
5	1.3	13	0.6
6	6.2	14	3.1
7	6.2	15	—
8	6.1	16	5.0

IC103 SVIμPC1018C

	FM	AM		FM	AM
1	—	5.5	9	—	0
2	—	0.7	10	—	0.8
3	—	0	11	—	5.5
4	—	2.6	12	—	5.5
5	3.2	—	13	—	—
6	4.3	—	14	—	0.7
7	3.8	—	15	—	—
8	3.2	—	16	—	0.7

■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology.)

Notes:

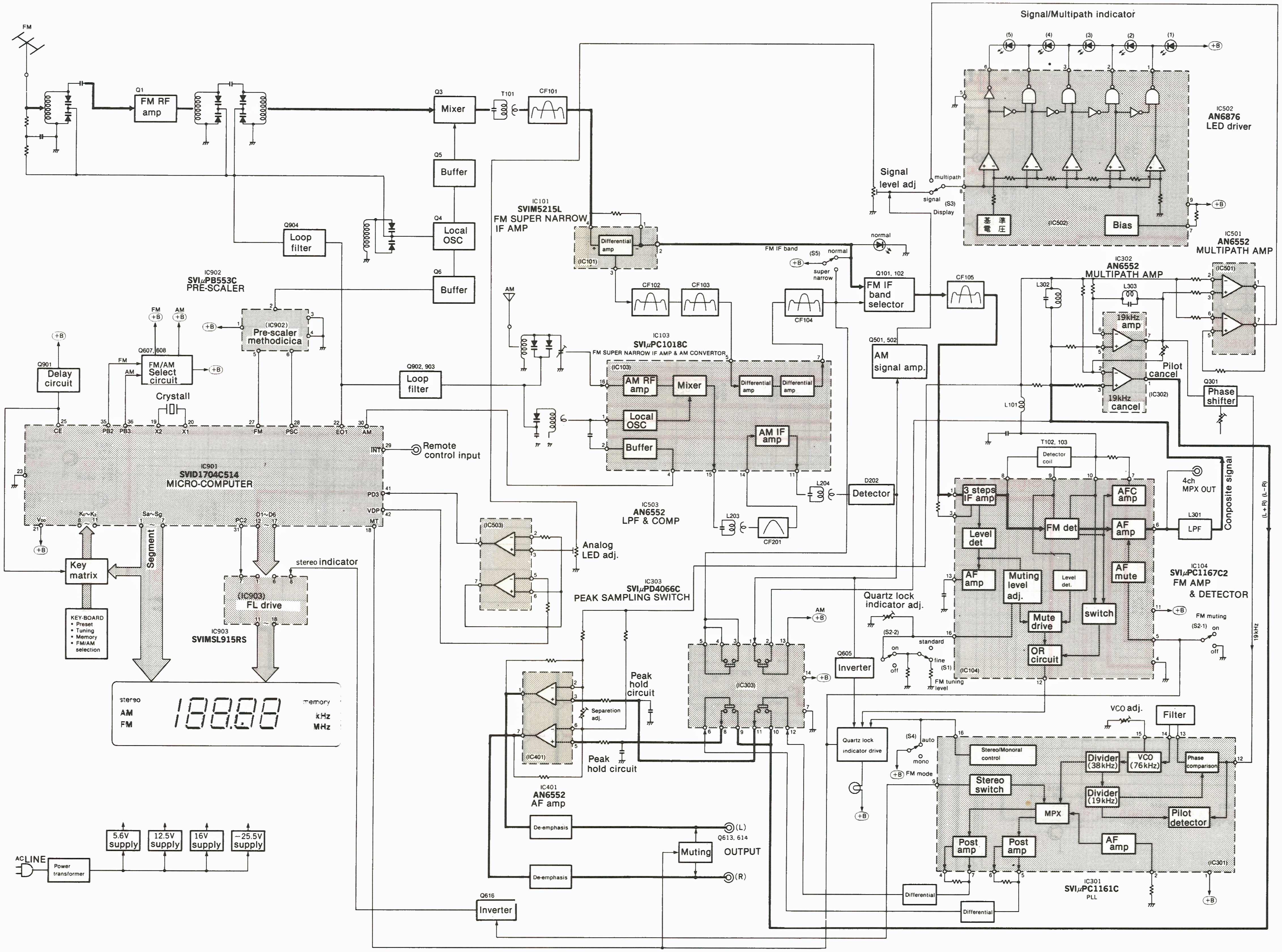
1. **S1** : FM frequency shift switch in "**+25 kHz**" position.
   off ←→ + 25 kHz
2. **S2** : FM muting and FM tuning level switch in "**on/fine**" position.
   on/fine ←→ off/standard
3. **S3** : Signal/Multipath indicator selector (display) switch in "**signal**" position.
   signal ←→ FM multipath
4. **S4** : FM mode switch in "**auto**" position.
   auto ←→ mono
5. **S5** : FM IF band selector switch in "**normal**" position.
   normal ←→ super narrow
6. **S6-1 ～ S6-8** : FM/AM random preset tuning switch.
   CH1 ～ CH16
7. **S6-9, S6-10** : Band selector switch. (S6-9. . . . . FM, S6-10. . . . . . AM)
8. **S6-11** : FM signal switch.
9. **S7-1, S7-2** : Tuning and auto-scan switch.
10. **S7-3** : Memory and auto memory switch.
11. **S8** : Power switch in "**on**" position.
12. **S10** : AM allocation switch in "**9 kHz**" position.
    9 kHz ←→ 10 kHz
13. **S12** : Voltage selector switch in "**220V**" position.
    100V ←→ 120V ←→ 220V ←→ 240V
14. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
    - * Figures in ▭ stand for DC voltage in FM signal (no signal) reception mode.
    - * Figures in ⌜ ⌟ stand for DC voltage in FM stereo signal reception mode.
    - * Figures in ( ) stand for DC voltage in AM signal reception mode.
    - * ▱ H : 5V, L : 0V
    - * ▭ H : 5V, L : –26V
15. Transistor and IC terminals which carry no voltage indication emit 5V pulse waveforms or are subject to change according to the frequency or input signal levels.
16. Signal lines
    - ⇨ / ▫▫⇨ FM signal
    - ➡ / ▪▪➡ AM signal
    - ⇨ Pilot signal
    - ➡ Audio frequency signal
    - ▬ Positive voltage line
17. Important safety notice:
    Components identified by ⚠ mark have special characteristics important for safety.
    When replacing any of these components, use only manufacturer's specified parts.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
A B C D E F G
FM ANT (75Ω)
FM
AM ANT
AM
FMOSC
AM OSC
Supper narrow IF
Quartz Lock indicator adj.
Normal IF
PLL VCO
FM composite signal
Phase shifter adj.
19KHz
Pilot cancel adj.
Separation adj.
Signal meter adj.
FM signal-strength indicator adj
4ch MPX OUT
REMOTE CONTROL INPUT
L
R
OUTPUT
–24.5V line
AC LINE 110/120/220/240V (50/60Hz)
A B C D E F H I
Digital display
Preset-tuning
IC 901 SVI1704C514 PLL CONTROLLER
IC 902 SVIμPB553C PRE SCALER
IC 903 SVIMSL915RS FL DIGIT STEREO IND DRIVER
IC 503 AN6552 LPF & COMP
IC 103 SVIμPC1018C FM IF & AM CONV
IC 101 SVIM5215L FM IF AMP
IC 104 SVIμPC1167C2 FM IF DET
IC 301 SVIμPC1161C PLL
IC 303 SVIμPD4066C MPX PEAK SAMPLING & SWITCHING
IC 501 AN6552 MULTIPATH AMP
IC 302 AN6552 MULTIPATH AMP
IC 401 AN6552 BUFFER AMP
IC 502 AN6876 LED DRIVER
Q1 3SK74 RF AMP
D1, 5~7 SVDSVC211 VARIABLE CAPACITORS
Q3 2SC1674 MIX
Q901 2SA733 SWITCHING
Q902~904 2SC945 LPF
D921 OA90
Q101~103 2SC829 SWITCHING
Q104 2SC945
Q301 2SC945 PHASE SHIFT
D201 SVDBB312 AM VARIABLE CAP.
D513 SVDMA26-2
D543 SVDMA26-1
Q501 2SC945 AF AMP
Q502 2SA733 AF AMP
Q518 2SC945 SWITCHING
Q503 2SA733 SWITCHING
D537 SVDMZ416
D506~510 SVDGL-9PR9
D511 SVDGL-9HY9
Q701 2SD762 REGURATOR
Q705 2SC1815 REGURATOR
Q608 2SA733 SWITCHING
Q603~605,615 2SC945 QUARTZ LOCK LAMP DRIVER
D709 MA1062A
D710 MA1064A
D711 MA150
D707 MA1130A
D706 SVDMZ333A
D701~704 SVDSR1K2
21 22 23 24 25

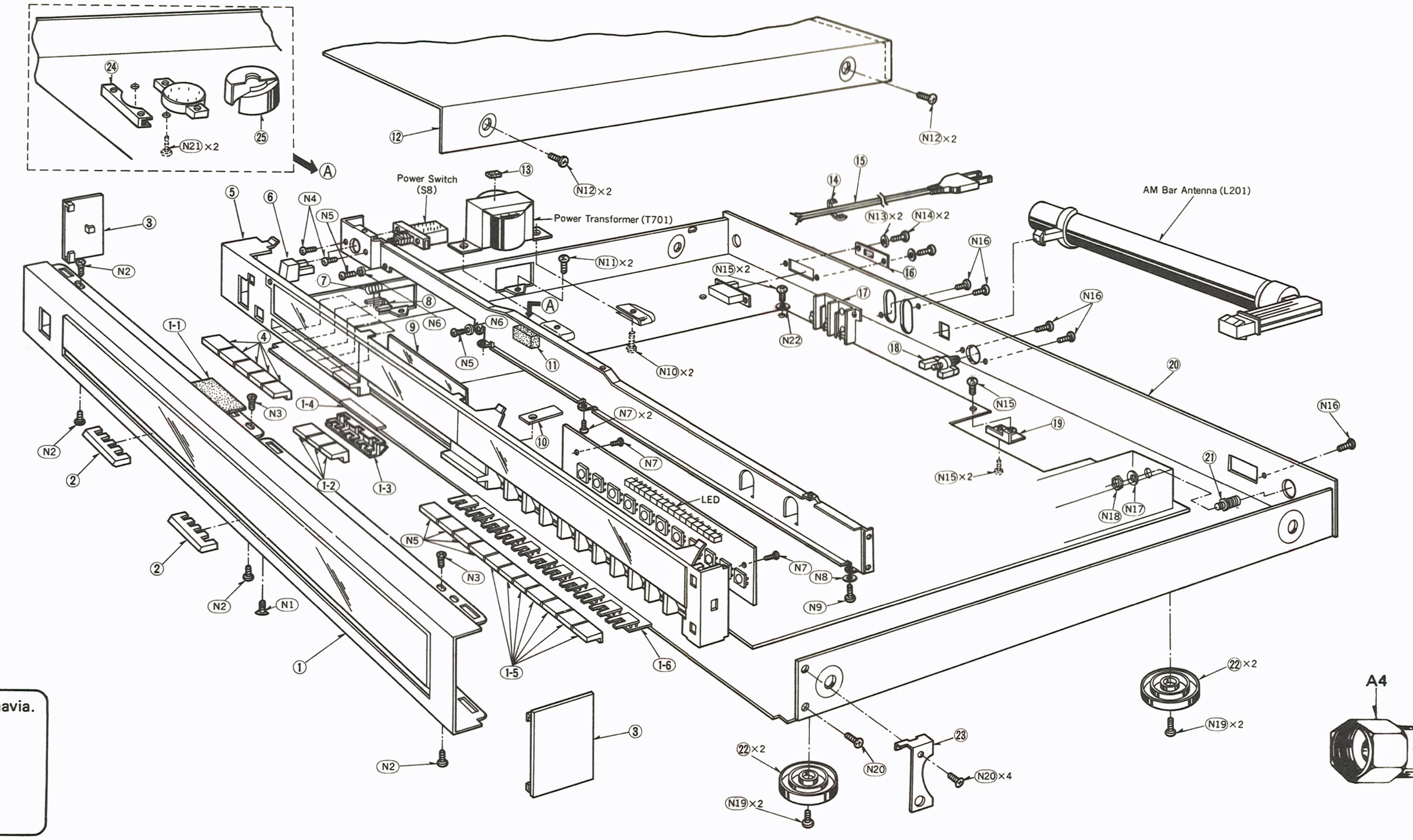
Continued on page 16

Ref. No.		Part No.	Part Name & Description
C121		**ECEA1ES101**	Electrolytic, 25V, 100μF
C123		**ECEA1ES101**	Electrolytic, 25V, 100μF
C124		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C125		**ECEA50Z1**	Electrolytic, 50V, 1μF
C126, 127		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C201		ECQM1H473KZ	Polyester, 50V, 0.047μF, ± 10%
C203		ECCD1H180KC	Ceramic, 50V, 18pF, ± 10%
C204		ECQP1471JZ	Polypropylene, 100V, 470pF, ± 5%
C205		ECKD1H223ZF	Ceramic, 50V, 0.022μF, $^{+80}_{-20}\%$
C207		ECKD1H223ZF	Ceramic, 50V, 0.022μF, $^{+80}_{-20}\%$
C208, 209		**ECEA1HS100**	Electrolytic, 50V, 10μF
C210, 211		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C212		**ECEA50ZR22**	Electrolytic, 50V, 0.22μF
C214		**ECEA1AS470**	Electrolytic, 10V, 47μF
C215		ECCD1H150KC	Ceramic, 50V, 15pF, ± 10%
C216		ECKD1H102ZF	Ceramic, 50V, 0.001μF, $^{+80}_{-20}\%$
C217		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C218, 219		ECKD1H223ZF	Ceramic, 50V, 0.022μF, $^{+80}_{-20}\%$
C301		**ECEA50Z1**	Electrolytic, 50V, 1μF
C302		**ECEA50MR22R**	Electrolytic, 50V, 0.22μF
C303		**ECEA50M3R3R**	Electrolytic, 50V, 3.3μF
C304		**ECEA50M1R**	Electrolytic, 50V, 1μF
C305		ECQP1471JZ	Polypropylene, 100V, 470pF, ± 5%
C306, 307		ECCD1H181K	Ceramic, 50V, 180pF, ± 10%
C308		**ECEA1HS100**	Electrolytic, 50V, 10μF
C309		**ECEA1ES101**	Electrolytic, 25V, 100μF
C310		ECQP1562JZ	Polypropylene, 100V, 5600pF, ± 5%
C311		ECQS1562JZ	Polystyrene, 100V, 5600pF, ± 5%
C312		ECQM1H822KZ	Polyester, 50V, 8200μF, ± 10%
C313		**ECEA1HS100**	Electrolytic, 50V, 10μF
C401, 402		ECQM1H102KZ	Polyester, 50V, 0.001μF, ± 10%
C403		ECKD1H471KB	Ceramic, 50V, 470pF, ± 10%
C404		ECQM1H102KZ	Polyester, 50V, 0.001μF, ± 10%
C405, 406		ECQM1H153JZ	Polyester, 50V, 0.015μF, ± 5%
C407, 408		**ECEA50Z2R2**	Electrolytic, 50V, 2.2μF
C501		**ECEA25Z4R7**	Electrolytic, 25V, 4.7μF
C502		ECKD1H223ZF	Ceramic 50V, 0.022μF, $^{+80}_{-20}\%$
C504		ECKD1H391KB	Ceramic, 50V, 390pF, ± 10%
C505		**ECEA1HS100**	Electrolytic, 50V, 10μF
C506		ECQM1H823KZ	Polyester, 50V, 0.082μF, ± 10%
C507		ECQM1H223KZ	Polyester, 50V, 0.022μF, ± 10%
C508		ECQM1H393KZ	Polyester, 50V, 0.039μF, ± 10%
C509		**ECEA1AS470**	Electrolytic, 10V, 47μF
C510		**ECEA1HS100**	Electrolytic, 50V, 10μF
C511		**ECEA25Z4R7**	Electrolytic, 25V, 4.7μF
C512		ECQM1H273KZ	Polyester, 50V, 0.027μF, ± 10%
C601		**ECEA25Z4R7**	Electrolytic, 25V, 4.7μF
C602		**ECEA1HS100**	Electrolytic, 50V, 10μF
C603, 604		**ECEA25Z4R7**	Electrolytic, 25V, 4.7μF
C605, 606		**ECEA50Z1**	Electrolytic, 50V, 1μF
C607, 608		**ECEA50Z2R2**	Electrolytic, 50V, 2.2μF
C616		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C701, 702		ECKD2H102KB	Ceramic, 500V, 0.001μF, ± 10%
C703, 704		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C705		**ECEA1VS221**	Electrolytic, 50V, 220μF
C706		**ECEA1VS102**	Electrolytic, 50V, 1000μF
C707		**ECEA2AS010**	Electrolytic, 100V, 1μF
C708		**ECEA1CS222**	Electrolytic, 16V, 2200μF
C709		**ECEA1AS101**	Electrolytic, 10V, 100μF
C710		**ECEA1HS101**	Electrolytic, 50V, 100μF
C711		**ECEA1VS471**	Electrolytic, 35V, 470μF
C712		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C713		**ECEA1CS471**	Electrolytic, 16V, 470μF
C714		**ECEA1ES101**	Electrolytic, 25V, 100μF
C715		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C716		**ECEA1AS470**	Electrolytic, 10V, 47μF
C717, 718		EECW1R8A3R3S	Gold-Capacitor, 1.8V, 3.3μF
C719		EECW1R8A3R3S	Gold-Capacitor, 1.8V, 3.3μF
C720		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C901		**ECEA1AS470**	Electrolytic, 10V, 47μF
C902		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C903		ECQM1H103KZ	Polyester, 50V, 0.01μF, ± 10%
C904		**ECEA50M4R7R**	Electrolytic, 50V, 4.7μF
C905		ECQM1H473KZ	Polyester, 50V, 0.047μF, ± 10%
C906		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C907		ECQM1H103KZ	Polyester, 50V, 0.01μF, ± 10%
C908		**ECEA1VS221**	Electrolytic, 35V, 220μF
C910		**ECEA0JS471**	Electrolytic, 6.3V, 470μF
C911		ECCD1H180KC	Ceramic, 50V, 18pF, ± 10%
C912		ECCD1H070DC	Ceramic, 50V, 7pF, ± 0.5pF
C913		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C914		**ECEA0JS102**	Electrolytic, 6.3V, 1000μF
C915, 916		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C917		ECKD1H102ZF	Ceramic, 50V, 0.001μF, $^{+80}_{-20}\%$
C919, 920		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$
C921		ECQM1H153KZ	Polyester, 50V, 0.015μF, ± 10%
C922		ECKD1H103ZF	Ceramic, 50V, 0.01μF, $^{+80}_{-20}\%$

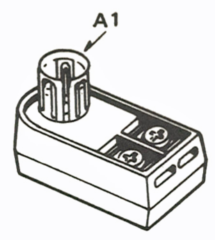
■ BLOCK DIAGRAM

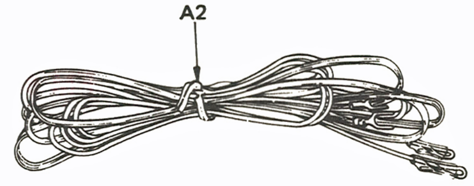

FM
Q1
FM RF amp
Q3
Mixer
T101
CF101
Q5
Buffer
Q4
Local OSC
Q6
Buffer
Q904
Loop filter
IC902
SVIμPB553C
PRE-SCALER
(IC902)
Pre-scaler methodicica
FM
AM
(+B)
Q607, 608
FM/AM Select circuit
Crystall
Q901
Delay circuit
Q902, 903
Loop filter
IC901
SVID1704C514
MICRO-COMPUTER
CE
PB2
PB3
X2
X1
FM
PSC
EO1
AM
INT
Remote control input
PD3
VDP
MT
Vcc
K1~K3
Sa~Sg
PC2
D1~D6
Segment
Key matrix
KEY-BOARD
• Preset
• Tuning
• Memory
• FM/AM selection
stereo indicator
(IC903)
FL drive
IC903
SVIMSL915RS
stereo
AM
FM
188.88
memory
kHz
MHz
5.6V supply
12.5V supply
16V supply
−25.5V supply
AC LINE
Power transformer
IC101
SVIM5215L
FM SUPER NARROW IF AMP
Differential amp
(IC101)
CF102
CF103
CF104
AM
IC103
SVIμPC1018C
FM SUPER NARROW IF AMP & AM CONVERTOR
(IC103)
AM RF amp
Mixer
Local OSC
Buffer
Differential amp
Differential amp
AM IF amp
L204
D202
Detector
L203
CF201
IC503
AN6552
LPF & COMP
(IC503)
Analog LED adj.
IC303
SVIμPD4066C
PEAK SAMPLING SWITCH
(IC303)
Peak hold circuit
Separation adj.
(IC401)
Peak hold circuit
IC401
AN6552
AF amp
De-emphasis
De-emphasis
Muting
Q613, 614
OUTPUT
(L)
(R)
Q616
Inverter
Q605
Inverter
Quartz lock indicator adj.
Quartz lock indicator drive
(S4) auto mono
FM mode
(S2-2) on off standard fine (S1)
FM tuning level
FM IF band
(S5) normal super narrow
normal
Q101, 102
FM IF band selector
CF105
Q501, 502
AM signal amp.
Signal level adj
multipath
signal
(S3) Display
Signal/Multipath indicator
(5) (4) (3) (2) (1)
IC502
AN6876
LED driver
基準電圧
(IC502)
Bias
IC501
AN6552
MULTIPATH AMP
(IC501)
IC302
AN6552
MULTIPATH AMP
L302
L303
L101
19kHz amp
19kHz cancel
Pilot cancel
(IC302)
Q301
Phase shifter
T102, 103
Detector coil
3 steps IF amp
Level det
AF amp
Muting level adj.
Level det.
Mute drive
OR circuit
FM det
AFC amp
AF amp
AF mute
switch
(IC104)
4ch MPX OUT
L301
LPF
Composite signal
IC104
SVIμPC1167C2
FM AMP & DETECTOR
FM muting (S2-1) on off
19kHz
(L+R) (L−R)
VCO adj.
Filter
Stereo/Monoral control
Stereo switch
Divider (38kHz)
VCO (76kHz)
Phase comparison
Divider (19kHz)
MPX
Pilot detector
Post amp
Post amp
AF amp
(IC301)
IC301
SVIμPC1161C
PLL
Differential
Differential

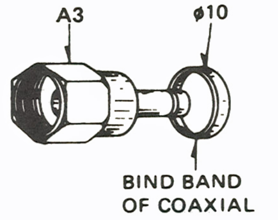
■ EXPLODED VIEW

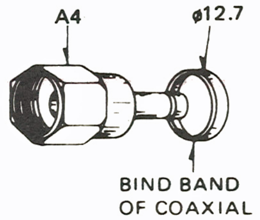


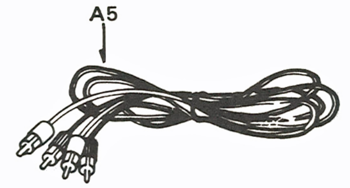
- Accessories











Areas

- * [E] and [EX] are available in Switzerland and Scandinavia.
- * [EK] is available in United Kingdom.
- * [EG] is available in F.R. Germany.
- * [EF] is available in France.
- * [EH] is available in Holland.
- * [EB] is available in Belgium.
- * [EA] is available in Austria.

■ REPLACEMENT PARTS LIST
...Cabinet & Chassis Parts

Notes:
1. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
2. Important safety notice:
   Components indentified by ⚠ make have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.
3. Ⓚ-marked parts are used for black type only, while ○-marked parts are for silver type only.
4. Parts other than Ⓚ and ○-marked are used for both black and silver types.
5. Bracketed indications in Ref. No. columns specify the area. Parts without these indications can be used for all areas.

Black type model No. : ST-S6(K)

Ref. No.		Part No.	Part Name & Description
CABINET and CHASSIS PARTS			
1	○	SGWTS6E	Front Panel Ass'y
1	Ⓚ	SGWTS6KE	Front Panel Ass'y (Black)
1–1		SHG6063–1	Spacer, Front Panel Ass'y
1–2		SBC343	Button, Tuning and Memory
1–3		SHR9541	Holder, Button
1–4		SHS3229–2	Spacer, Holder
1–5		SBC341	Button, FM/AM Preset Tuning, Selector
1–6		SHR9543	Holder, Button
2		SGX7007	Ornament Button
3	○	SGX7003–1	Ornament, Left and Right Side
3	Ⓚ	SGX7003	Ornament, Left and Right Side (Black)
4		SBC341	Button, FM IF Band, Mode, Display Muting, Frequency Shift
5	○	SGXTS6E	Front Sub Panel Ass'y
5	Ⓚ	SGXTS6KE	Front Sub Panel Ass'y (Black)
6		SBC337	Button, Power Source Switch
7		SUS231–1	Spring, Button
8		SBZ601	Holder, Button
9		SHR5113	Filter, FL
10		SUW1821	Bracket, Front Sub Panel Ass'y
11		SHG657	Rubber, FL
12	○	SKCTS6E	Cabinet Cover
12	Ⓚ	SKCTS6KE	Cabinet Cover (Black)
13		SHG647	Rubber, Power Transformer
14		SHR127	Bushing, AC Cord
14 [EK] only		SHR129	Bushing, AC Cord
15		**SJA88**	AC Cord
15 [EK] only		**QFC1205M**	AC Cord
16		SHR5073–1	Cover, Allocation Switch
17		SJF3431–3N	Terminal Board, Output
18		SJF4103	Terminal Board, Antenna
19		SUW1641–1	Bracket, PCB
20		SGPTS6E	Rear Panel Ass'y
20 [EK, EG, EF, EB, EH] only		SGPTS6E1	Rear Panel Ass'y
21		SJSA67–1	Socket
22		SKL227	Foot
23		SUW1815	Bracket, Front Panel Ass'y
24		SMN1635	Bracket, Voltage Adjustor Switch
25		SUV473	Cover, Voltage Adjustor Switch
SCREWS, WAHSERS and NUT			
N1	○	**XSS3+8BNS**	Screw, ⊕ 3 x 8
N1	Ⓚ	**XSS3+8BVS**	Screw, ⊕ 3 x 8 (Black)
N2		**XTB3+8BFZ**	Screw, Tapping ⊕ 3 x 8
N3		**XTS3+8BFZ**	Screw, Tapping ⊕ 3 x 8
N4		**XSS3+6S**	Screw, ⊕ 3 x 6
N5		**XSN3+6S**	Screw, ⊕ 3 x 6
N6		**XWA3B**	Washer, Spring ϕ3
N7		**XTB3+8BFZ**	Screw, Tapping ⊕ 3 x 8
N8		**XSN3+8BNS**	Screw, ⊕ 3 x 8
N9		**XWA3BFN**	Washer, Spring ϕ3
N10		**XTB3+10BFZ**	Screw, Tapping ⊕ 3 x 10
N11		**XTB3+8BFZ**	Screw, Tapping ⊕ 3 x 8
N12	○	**XTB4+8BFN**	Screw, Tapping ⊕ 4 x 8
N12	Ⓚ	**XTB4+8BFZ**	Screw, Tapping ⊕ 4 x 8 (Black)
N13		**XSN3+5BVS**	Screw, ⊕ 3 x 5
N14		**XWA3BFZ**	Washer, Spring ϕ3
N15		**XTB3+6BFZ**	Screw, Tapping ⊕ 3 x 6
N16		XTBS3+8BFZ1	Screw, Tapping with Detent ⊕ 3 x 8
N17		**XWC9B**	Washer, External Toothed Lock ϕ9
N18		**XNG9E**	Nut, ϕ9
N19		**XTB3+10BFZ**	Screw, Tapping ⊕ 3 x 10
N20		**XTS3+8BFZ**	Screw, Tapping ⊕ 3 x 8
N21		XTB3+16BFZ	Screw, Tapping ⊕ 3 x 16
N22		**XWC3B**	Washer, External Toothed Lock ϕ3
ACCESSORIES			
A1		TJB525102	Plug, 300-ohm → 75-ohm Impedance Conversion
A2		SSA267	Cord, FM Feeder Antenna
A3		SJSA68–1	Plug, F-Type/Ring (Large)
A4		SJSA74	Plug, Coaxial (W/Bind Band) for "5C–2V"
A5		SJP2129–5	Cord, Stereo Pin-Type Connection
A6		SQF10759	Instructions Book, Printed Matter
PACKING PARTS			
P1		SPP647	Polyethylene Bag
P2		SPS3029	Pad, Front
P3		SPS3031–4	Pad, Rear
P4	○	SPG3053	Carton Box
P4 [EF] only	○	SPG3069	Carton Box
P4	Ⓚ	SPG3059	Carton Box

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